

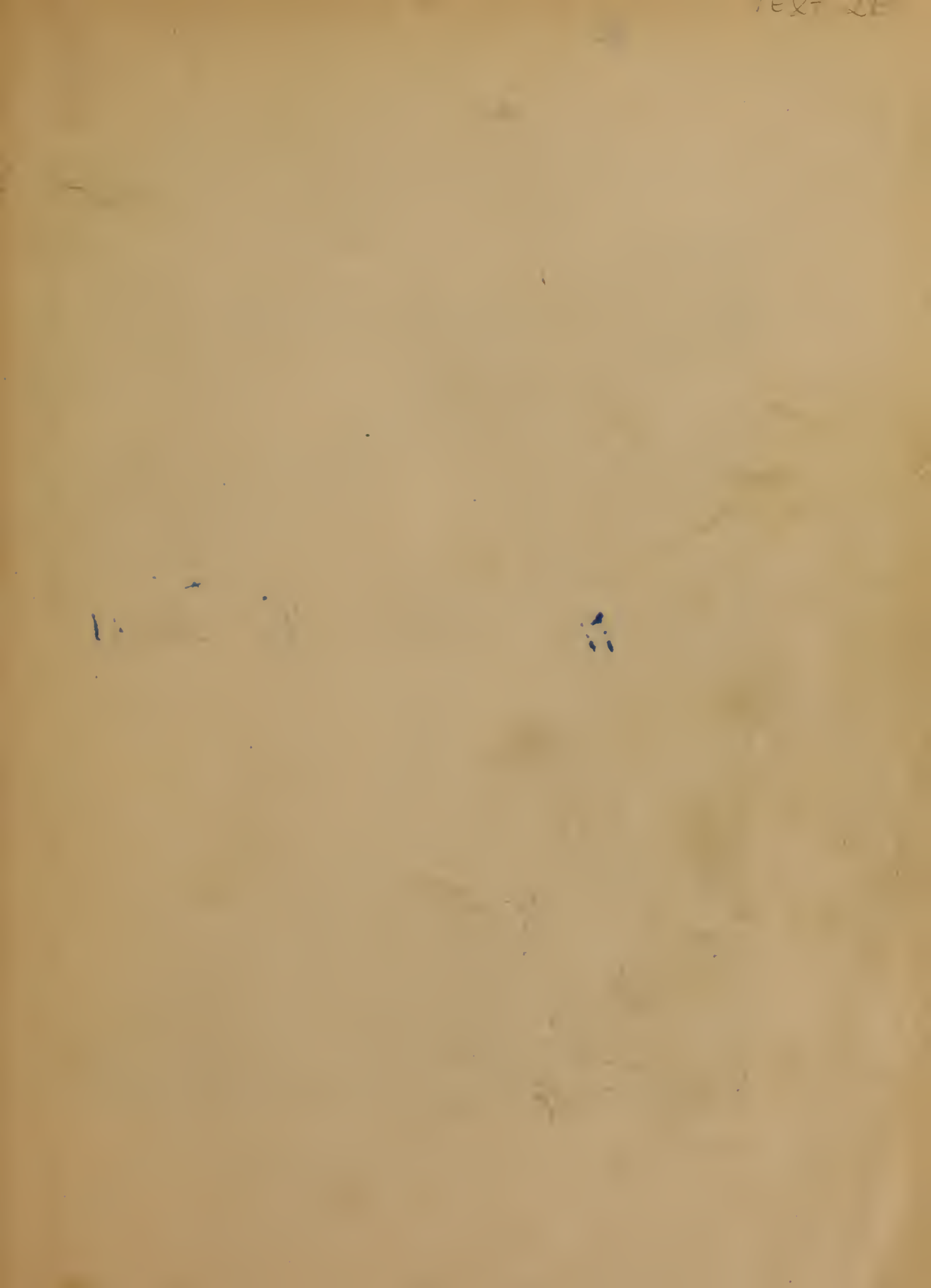
GEOGRAPHY OF NEW YORK

THE STATE - THE CITY



AVERY ARCHITECTURAL AND FINE ARTS LIBRARY

GIFT OF SEYMOUR B. DURST OLD YORK LIBRARY



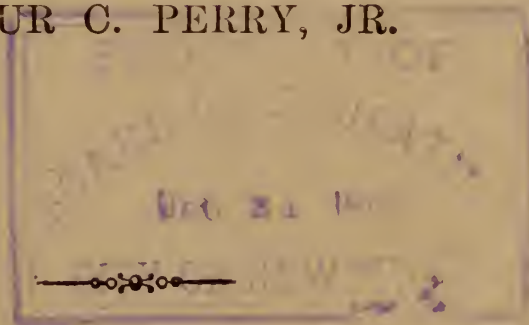


NIAGARA FALLS.

GEOGRAPHY
OF
NEW YORK

THE STATE—THE CITY

BY
FLOYD R. SMITH
AND
ARTHUR C. PERRY, JR.



NEW YORK ··· CINCINNATI ··· CHICAGO
AMERICAN BOOK COMPANY

OFF 5 132
E-A
441
564

COPYRIGHT, 1904, BY
FLOYD R. SMITH AND ARTHUR C. PERRY, JR.

ENTERED AT STATIONERS' HALL, LONDON.

— — —
GEOG. NEW YORK,

U. P. 8

PREFACE

THE many-sided importance of the state of New York, and its predominance as a factor in the development of our national greatness, have been too little appreciated by the pupils of the state, and particularly by those of the city of New York. However, a decided advance was made in the recently adopted Course of Study for the Public Schools of New York City, which requires, in the fifth year of the school curriculum, a definite study of the geography of the state and of certain topics in the history of the city.

It is the aim of this volume to present the topics of the New York City "syllabus" — both geographical and historical — in orderly arrangement, and in language adapted to the understanding of the pupils of the grade.

The book therefore divides itself into two parts. The first treats of the geography of the state, showing nature's many contributions and the use man, in his tireless industry, has made of them. The second part treats in further detail of the city of New York, by presenting both its chief geographical features and a brief sketch of its early history.

It is hoped that the book may be of service to pupils throughout the state, acquainting them with the various factors of growth, showing them how these factors have made the state the foremost in the Union, and thus implanting that local pride which in due season shall ripen into a broad and intelligent national patriotism.

CONTENTS

	PAGE
THE STATE OF NEW YORK.	
Location	9
Surface	12
Drainage	16
Size	27
Importance	28
Resources	28
Industries and Occupations	31
Products	36
Commerce	41
Manufacturing Centers	52
Commercial Centers	54
Advantages of Location	58
Social Development	60
Government	64
Educational Centers	66
THE CITY OF NEW YORK.	
Introduction	69
As an Industrial and Commercial Center	72
Physical Conditions determining its Growth and Importance	74
Means of Transportation and Communication	75
Public Works	78
Parks	81
Public Schools	84
Other Public Institutions	87
Great Mercantile Concerns	95
Financial Concerns	98
Manufacturing Concerns	101
Leading Factors determining Public Improvements	103
New York Harbor	107
Local History	110

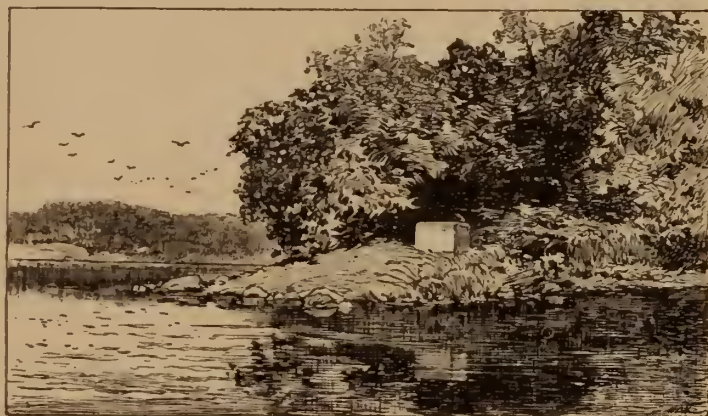
MAPS

	PAGES
PHYSICAL MAP OF THE STATE OF NEW YORK	10-11
POLITICAL MAP OF THE STATE OF NEW YORK	46-47
MAP OF THE CITY OF NEW YORK	70-71

THE STATE OF NEW YORK

LOCATION

NEW YORK is the northernmost of the Middle Atlantic states, with Pennsylvania and New Jersey on the south and southwest, Vermont, Massachusetts, and Connecticut on the east, and the Canadian provinces of Ontario and Quebec on the north and northwest. The general form of the state is that of a triangle, with Long Island added at the southeastern corner. The Canadian boundary line runs through the middle of Lake Erie, Niagara River, Lake Ontario, and the St.



TRI-STATE ROCK, PORT JERVIS.

Lawrence to the forty-fifth parallel of north latitude, and thence eastward to the outlet of Lake Champlain. The dividing line between the state and New England follows the deepest channel of Lake Champlain for more than a hundred miles, and then extends overland in an irregular southerly line, finally turning eastward through the middle of Long Island Sound. The parallel of 42° north latitude and the Delaware River form the Pennsylvania boundary line. From Port Jervis, where three states meet,

80

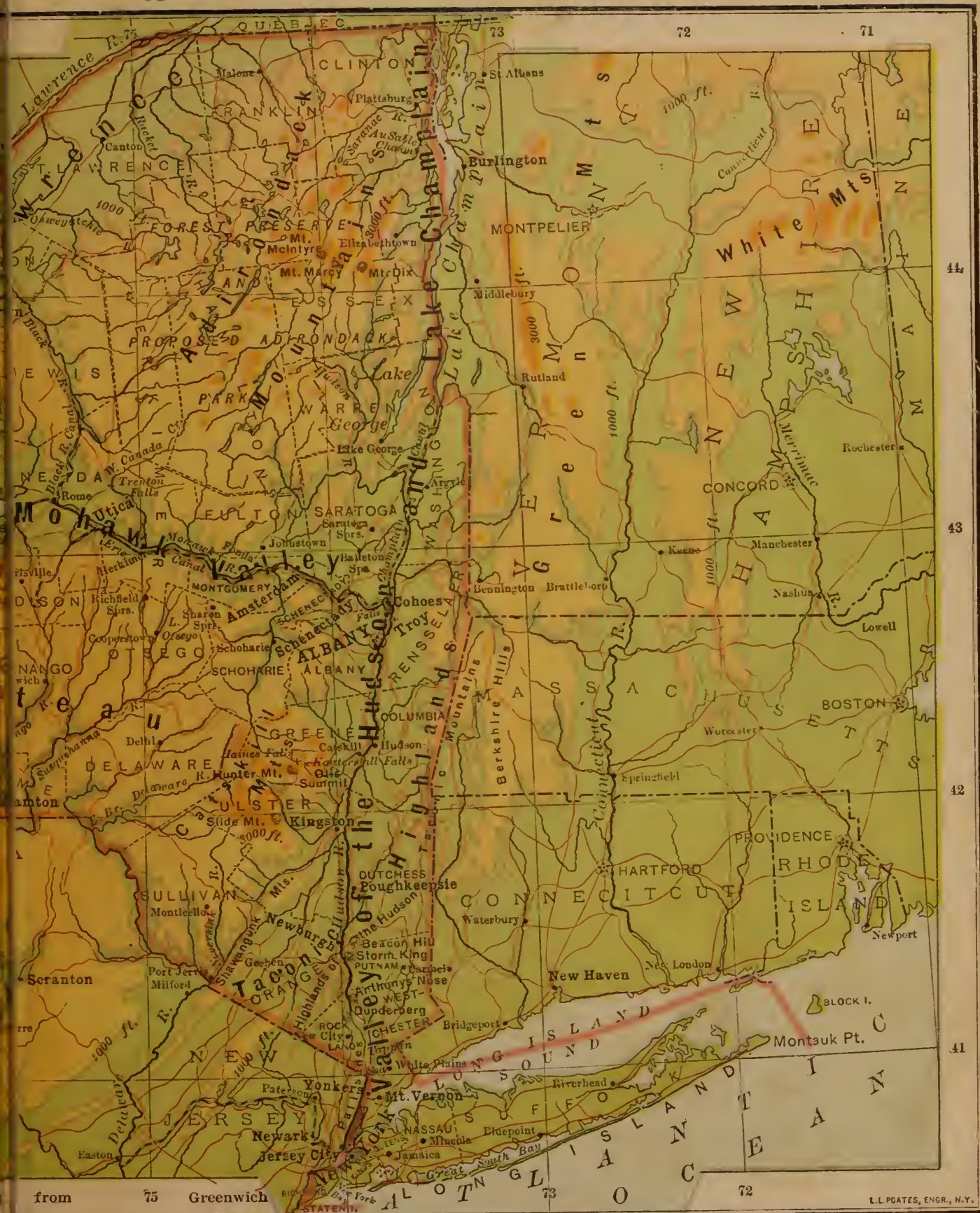
79

78

77

76





the New Jersey boundary line runs southeast to the Hudson and thence south to New York Bay. South of Long Island spreads the Atlantic Ocean, the great highway for the common use of the nations of the world.

SURFACE

If you look at a map of the United States, you will see that the Appalachian Highlands, which for a great distance lie almost



Copyright, 1902, by Detroit Photographic Co.

LONG LAKE, ADIRONDACK MOUNTAINS.

parallel with the Atlantic coast, extend into and across New York. Hence there are in this state long ranges of mountains and many high peaks. But these mountains have been cut through by so many powerful rivers that the surface is everywhere broken up into highland and lowland. In general, it may

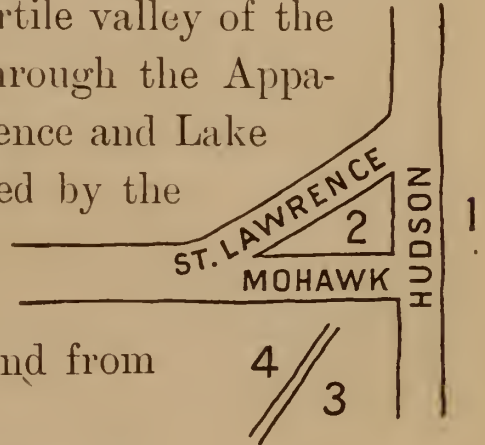
be observed that the eastern portion of the state is mountainous and the western much more level. The chief **LOWLAND** tracts are three in number.

(1) **The Valley of the Hudson and Lake Champlain**, narrow, but 300 miles or more in length, extends north and south across the state.

(2) **The Valley of the St. Lawrence**, a long strip of lowland of varying width, descends from the level of the Appalachian Highlands to the shores of the Great Lakes and their outflowing river.

This descent is made by a series of terraces, two of which can be plainly seen. The lower is called the *Lake Ridge*, and the higher the *Mountain Ridge*.

(3) **The Valley of the Mohawk** connects these two lowlands. Its length is not much more than a hundred miles, yet it is of great importance, not only as the most fertile valley of the state, but because it is the only break through the Appalachian Highlands south of the St. Lawrence and Lake Champlain. In the early days it was used by the Indians and fur traders, and to-day, by means of canals and railroads, it is the chief route of travel and commerce to and from the great West.



These three great valleys together have the general form of a figure 4. The chief **HIGHLAND** regions are *four* in number.

1. Taconic Highlands.
2. The Adirondaeks.
3. The Catskills.
4. The Alleghanies.

(1) **The Taconic Highlands** extend across the southeastern part of the state and lie mostly on the eastern side of the Hudson



HIGHLANDS OF THE HUDSON.

River. They form the connecting link between the Blue Ridge Mountains of Virginia on the southwest and the Berkshires of Massachusetts and the Green Mountains of Vermont on the northeast. At some

places they reach a height of 2500 feet. The Taconic Highlands include the Shawangunk and Delaware mountains, west of the

Hudson; the Highlands of the Hudson, on both sides of the river; and the Taconic Range, northeast of the Highlands. In

the Highlands of the Hudson are many peaks (as the Dunderberg, Anthony's Nose, Storm King, and Beacon Mountain), which, though not of great height, are famous on account of their history and their beauty.



STORM KING.

(2) **The Adirondacks**, the highest and

most picturesque mountains of the state, are bounded by all three of the great valleys. The eastern slope, to Lake Champlain, is very abrupt. Mt. Marcy, towering a mile above the ocean level, is the highest peak. Some of the others are Mt. McIntyre,



Mt. Clinton, and Mt. Dix. Among the Adirondack Mountains are many favorite haunts of the tourist. On most of the lakes thousands of people find accommodation in the beautifully located hotels, while many others set up camps on private or government lands.



Copyright, 1902, by Detroit Photographic Co.

FISHING IN THE ADIRONDACKS.

(3) **The Catskills**, rising some ten miles west of the Hudson, slope down on the north to the Mohawk Valley. This mountain region, second only to that of the Adirondacks in height and



Copyright, 1902, by Detroit Photographic Co.

VIEW FROM OTIS SUMMIT.

beauty, is one of the most popular of summer resorts. The highest peaks are Slide Mountain and Hunter Mountain, each with an altitude of more than 4000 feet. Eastward from Hunter Mountain is Otis Summit, from which spreads a magnificent

picture of mountain, valley, and the distant Hudson. The Otis Elevating Railway extends from the summit to the valley below.

(4) The Allegheny Plateau extends from the Catskills westward across the state to within five miles of Lake Erie. On the north this table-land ends within thirty miles of Lake Ontario. Its elevation above sea level varies from 1000 to 2000 feet, while a few peaks reach an altitude of nearly 3000 feet.



Copyright, 1902, by Detroit Photographic Co.

KAATERSKILL FALLS,
CATSKILLS.

In addition to the three main lowland tracts of the state there are many smaller valleys, which in turn divide the highland regions into smaller groups of mountain ridges. Among them are:—

(1) The valleys of the Central Lakes, which lie north and south in great troughs in the central part of the Allegheny Plateau.

(2) The valleys of the Susquehanna and Delaware rivers and their branches, which separate the Catskills from the Allegheny Plateau.

(3) The valleys of the Hudson and Delaware, which separate the ranges south of the Catskills, the Delaware, Shawangunk, etc.

DRAINAGE

River Systems. — The lowland regions are in every case valleys formed by rivers which through thousands of years have cut their way from mountain top to ocean level. Even the lakes are really only wider rivers. The waters from New York all find their way to the Atlantic Ocean, although through ocean arms as far

apart as the Gulf of St. Lawrence and the Gulf of Mexico. The river systems represented are five in number: the St. Lawrence, the Hudson, the Delaware, the Susquehanna, and the Mississippi.

Rivers. — The most important of the rivers are as follows: —

(1) In the *St. Lawrence* system there are, first, the border rivers, the Niagara and the St. Lawrence, the one feeding Lake Ontario and the other draining it.

Then there are the rivers flowing into Lake Ontario. The Genesee River rises in northern Pennsylvania, at an altitude of 2500 feet, and is the only river flowing entirely across the state. It is some 200 miles long, and in its lower part, cutting its way down from the Allegheny Plateau, it flows between great sandstone cliffs hundreds of feet high. The Oswego, formed by the junction of the Seneca and Oneida rivers, is but twenty-four miles long, yet as the outlet of the Central Lakes it discharges a very large volume of water. The Black River rises in the Adirondacks and is about 120 miles long.

The other rivers of the system are those flowing directly into the St. Lawrence or through Lake Champlain, all of which have their sources high in the Adirondacks.



GENESEE RIVER.

(2) In the *Hudson* system is the Hudson River, the longest river of the state. It lies entirely within the state, and flows 350 miles from the Adirondacks south into New York Bay. For the last 150 miles of its course it is navigable for steamboats, and in the last hundred it makes a fall of only five feet.

To the lover of nature a trip up the Hudson on one of the river steamers is a never-failing delight. Before leaving New



THE PALISADES.

York city, one may see the lofty Palisades rising on the left. These immense cliffs extend from Weehawken to Nyack and at one point reach a perpendicular height of 550 feet from the river's level. The Palisades are to be kept by the states of New York and New Jersey as a public park, with a fine road running at their base along the river's edge for fifteen miles or more. At the Tappan Zee, and again at Haverstraw, the river broadens to a width of more than three miles. All along, on either bank,

DRAINAGE

are thriving villages, and a mile above Haverstraw there comes to view the lighthouse at the foot of the battle ground of Stony Point. Beyond, at a bend in the river, near the village of Peekskill, the Dunderberg Mountain stands sentinel at the southern entrance to the Highlands. North to Newburgh the river winds most beautifully in and out between the steep mountains. Beyond the Highlands it grows narrower, and its banks become more and more level



STONY POINT.

until we arrive at the capital city, Albany. At Cohoes, a few miles farther north, its chief tributary, the Mohawk River, empties into the Hudson.

The Mohawk has an entire length of 175 miles, and from the city of Rome descends eastward some 450



MOHAWK VALLEY.

feet. Many prosperous cities are situated along its banks and are of interest both commercially and historically.

The other branches of the Hudson are not of great importance.

(3) In the *Delaware* system the principal water course is the Delaware River, which rises by two branches, the east and the west, in New York state. As we have already noted, it forms the boundary line between Pennsylvania and New York for about seventy-five miles of its length. Its chief tributary is the Neversink.

(4) The *Susquehanna* system includes the headwaters of the Susquehanna River and its tributaries. This river rises in Otsego



Copyright, 1900, by Detroit Photographic Co.

SUSQUEHANNA RIVER.

Lake, within twenty miles of the Mohawk, but hundreds of feet above it. It flows into Pennsylvania and back into New York before finally leaving the state for its course through Pennsylvania. It has a large number of tributaries in New York, chief of which are the Chenango and Chemung.

(5) The *Mississippi* system. Tributaries of the Allegheny River rise near the very edge of the Allegheny Plateau, within less than ten miles of the Lake Erie shore. The waters of these tributaries thus flow away from the St. Lawrence system, for hundreds of miles, seeking an outlet which they finally find, through the Mississippi, in the Gulf of Mexico.



SCENE AMONG THE THOUSAND ISLANDS.

Islands. — In the St. Lawrence and Hudson river systems are most of the islands of the state, which may be divided into two groups.



SUMMER RESIDENCE, THOUSAND ISLANDS.

The Northwestern Group includes Grand Island in the Niagara River, several small islands in Lake Ontario, and a remarkable collection of

rocky patches, known as the Thousand Islands, in the St. Lawrence. The Thousand Island region is a paradise for summer excursionists. In the very heart of the region, on the New York shore, is Alexandria Bay, whose natural beauty has attracted visitors from all parts of the globe. A sail from this point through the island channels presents a variety of scenery nowhere surpassed. Magnificent hotels, pretty cottages, and summer camps



ONE OF THE THOUSAND ISLANDS.

lie amid the wildest and most picturesque natural surroundings.

The Southeastern Group is at the mouth of the Hudson River. Manhattan Island, fourteen miles in length and less than three in width, but the most remarkable island of the world, is separated from the mainland on the north by the Harlem River. Staten Island, three times the size of Manhattan, lies five miles to the south of it. Long Island, separated from Man-



Copyright, 1888, by S. R. Stoddard.

A CASCADE.

hattan by the East River, which is really only a strait, is about 110 miles long and varies from eight to twenty miles in width. There are also numerous small islands near Long Island.

Waterfalls.—It must be remembered that very few rivers flow with a uniform descent. A river may flow for miles with but a slight decline, and then suddenly plunge over a rocky wall in a number of cascades, or drop in a single fall. Many of the rivers of New York contain waterfalls of great beauty and often, as we shall see later, of great use.

The *Niagara Falls* are the most noted of these. The immense volume of water from four of the five Great Lakes passes to Lake Ontario by way of the narrow Niagara River. Over the rocky bed of this river it flows, until in the course of half a mile it descends forty feet, thus forming what are known as the

Rapids of the Niagara. Then it drops four times this height in a stupendous fall. Goat Island divides the mile-wide stream at this point so that the fall is made in two branches, the narrower American Falls, 167 feet high, and the broader, horseshoe-shaped Canadian Falls,



NIAGARA FALLS.

158 feet high. Below the falls the river forms what is known as the Whirlpool Rapids, and later, broadening into one of the calmest of streams, empties into Lake Ontario.

In the Genesee River there are two groups of falls, one at Portage, where there is a descent of 330 feet in three miles, and the other at Rochester, where there is a drop of 200 feet in three cascades. At what is known as the Middle Fall at Portage, the river has worn out of the bank a curious cave called the Devil's Oven, large enough to hold a hundred people.



WHIRLPOOL RAPIDS.

In the lower course of the Au Sable River there is a number of swirling rapids and dashing falls

beyond which is the famous *Au Sable Chasm* where the river rushes for two miles between sheer walls of rock a hundred feet in height and only fifty feet apart.



AU SABLE CHASM.

On the Mohawk there are the *Cohoes Falls*, seventy feet in height. West Canada Creek, a branch of the Mohawk, by half a dozen falls called the *Trenton Falls*, descends 312 feet in two miles. The Kaaterskill Falls (see page 16) and Haines Falls in the Catskills are also worthy of mention.

Lakes. — New York is noted for its large number of lakes, many of great beauty. Most of them belong to the St. Lawrence River system. In fact, the Delaware system has no lake of any size, and the Susquehanna has only *Lake Otsego*, which, at an altitude of 1200 feet, is at the source of that river. In the Mississippi system there is *Lake Chautauqua*, a beautiful sheet of water in the extreme western part of the state. It is 1300 feet above sea level — 700 feet higher than Lake Erie, only eight miles away. The Hudson River system contains a few of the famous Adirondack lakes, but, as has been remarked, the sys-



LAKE CHAUTAUQUA.

tem which includes the greatest number of lakes is that of the St. Lawrence. Most important of all are the border lakes: *Lake Erie* with its surface nearly 600 feet above sea level, and not navigable in winter; *Lake*



LAKE CHAMPLAIN.

Ontario, more than 300 feet lower than Erie, and never frozen over;



Copyright, 1890, by S. R. Stoddard.

LAKE GEORGE.

and *Lake Champlain*, the northern gateway of the state, beautifully surrounded by the Adirondacks and the Green Mountains. Tributary to Lake Champlain is the picturesque *Lake George*, some forty miles in length, and famed for its clear water, its throng of little islands, and its wild, wooded



BABY ISLAND, LAKE GEORGE.

shores. Ticonderoga Creek connects Lake George with Lake Champlain into which it empties, after a descent of 200 feet,



Copyright, 1901, by S. R. Stoddard.

RUINS OF FORT TICONDEROGA.

near the crumbling ruins of old Fort Ticonderoga. Also finding their outlet into the St. Lawrence, through either the rivers flowing directly into it or those feeding Lake Champlain, are most

of the Adirondack lakes, brilliantly set amid the forests of the great mountains. In the central part of the state is the group of lakes which from their shape are often known as the *Finger Lakes*. We have seen that the Oswego River is their outlet into Lake Ontario. The most important of them are *Cayuga*, *Seneca*, and *Oneida*, all navigated by steamboats. At the head of Seneca Lake are the wonderful *Watkins Glen* and *Falls*. The former is a great gorge in a rocky plateau, about three miles in length and reaching a depth of 300 feet. Through the Glen a swirling mountain brook breaks its way in a number of rapids, cascades, and falls. Near the western shore of Cayuga Lake are the graceful



WATKINS GLEN.



TAUGHANNOCK FALLS.

Taughannock Falls, fifty feet higher than Niagara, which rush into a ravine whose walls are 400 feet high. In the neighborhood are more than a dozen other important waterfalls. Indeed, the whole region about these lakes abounds in attractive scenery.

SIZE

New York is not by any means one of the largest states in the Union. In fact, of the forty-eight states, twenty-eight are larger than New York. Yet its area is more than three

fourths of that of all New England, but less than one fifth of that

of Texas, and its water surface is greater than the entire area of Rhode Island. The length and

width of New York are each over 300 miles, and its surface is nearly 50,000 square miles. A most important fact is that the state has a water frontage of nearly 1000 miles. Politi-

cally, the state is divided into sixty-one counties, the most populous of which is New York, and the largest in area, St. Lawrence.

NEW YORK

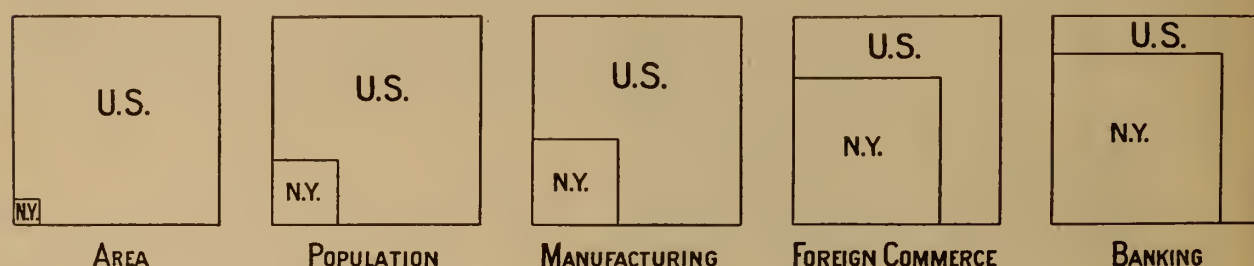
NEW
ENGLAND

TEXAS

RELATIVE AREAS

IMPORTANCE

We have already seen that New York has advantages of location, surface, drainage, and size, which, properly used, would make the state one of great importance. As a matter of fact, it is easily the first state of the Union—the Empire State, as it is called. Its area is only one seventieth of that of the United



States; and yet it has about one tenth of the population, the value of its manufactures is one sixth, it handles one half of the foreign commerce, and it carries on two thirds of the banking business. Since 1820 New York has led the states of the Union in population, having been fifth in 1790, third in 1800, and second in 1810. It now has over 9,000,000 inhabitants. More than this, the state has a foremost place in literature, art, and education.

RESOURCES

We have spoken of the physical advantages of New York. Let us see more closely what they are.

Water Power. — We have seen that the land is so shaped and located that there is a long water frontage, — on lake, river, and ocean, — that there are rivers upon which boats may be run,



NIAGARA WATER POWER.

and yet other rivers wherein are huge waterfalls. These falls are valuable as sources of power. In some cases, as in the falls of the Genesee at the city of Rochester and in the falls of the Oswego at the village of Fulton, the falling water is made to turn mill wheels which set in motion all kinds of machinery. In the case of the falls at the city of Niagara Falls, the water is led into great pits, where it drops on big wheels called turbines, and escapes through a two-mile tunnel under the city into the river *below* the falls. The revolving turbines put into motion great dynamos in the power



INTERIOR OF POWER HOUSE, NIAGARA.

house which make electricity. The power in this form is then distributed through wires to a distance of many miles and used in running factories, railroad cars, and other machinery.

Climate. — Another advantage which New York enjoys is a temperate climate, neither too warm nor too cold except on a few days in the year or in a few localities. The rainfall is moderate,

and well distributed both throughout the year and over the state.

Soil. — Again, a large part of the surface of New York has a fertile soil. This is especially true of the great valley regions along the Great Lakes,



ALLUVIAL PLAIN NEAR BINGHAMTON.

along the Hudson, Mohawk, and Genesee, about the Central Lakes, and at what is known as the Great Alluvial Plain of the Susquehanna River in the Allegheny Plateau, where the river has left a sediment of rich, fertile soil for miles around.

Minerals. — In the earth itself are large resources, such as iron ore, salt, petroleum, natural gas, granite, and marble.

Plants and Animals. — Again, let us consider the plant and animal life of the state. Before Europeans came to New York, dense forests covered the entire region. Chief of the trees is the pine, and in the Adirondacks large quantities of other evergreens — particularly the spruce and the hemlock. These are found, too, in other parts of the state, but mingled with hard-

woods. Especially plentiful are the oak, maple, hickory, chestnut, basswood, and elm. Of the larger wild animals, few have escaped the gun and trap. But small game, like rabbits and squirrels, and game birds still abound. Fish there are in plenty — in the fresh-water lakes and rivers, trout, bass, pickerel, and whitefish; and in the salt water, shad, bluefish, mackerel, oysters, and clams.

INDUSTRIES AND OCCUPATIONS

But all these resources would be worthless without the industry of man. It requires effort on his part even to catch fish or trap a wild animal. All the different forms of effort which man makes to turn the resources of nature to his own use we call Industries. The chief of these are: Lumbering, Farming, Fishing, Mining and Quarrying, and Manufacturing.



Copyright, 1888, by S. R. Stoddard.

LUMBERING IN THE ADIRONDACKS.

Lumbering. — The people have been so active in clearing the land of trees that almost all of the useful timber has been cut down, except in the Adirondack region. In 1850 New York was the leading state in lumbering, but to-day it is twelfth, and the entire wooded portion of the state is not much

more than a third of the total area. However, lumbering is still an important industry, which thrives chiefly in the Adirondacks. Here, during the winter, when the lakes, streams, and marshes are frozen into firm roadways, the ax of the lumberman is busy, and the delightful summer camps on the green banks of lakes and rivers give place to the snow-bound lumbering camps, where the huge pine, hemlock, and spruce are felled and dragged to con-



LOGS IN THE RIVER AT GLENS FALLS.

venient storing places on the ice-bound rivers. When in the spring the ice begins to loosen and melt, and the streams swell into powerful torrents, the exciting and dangerous work of lumbering begins. Agile and skillful lumbermen, armed with long poles, direct the floating logs in their course down stream, and many are the hairbreadth escapes and deeds of reckless daring told at the evening camp fires.

But it is necessary that a certain amount of forest land be allowed to remain, as it holds the rainfall and thus keeps up the water supply of the rivers. As the lumbermen in the past were frequently selfish and reckless in destroying the trees, the state government has acquired forest lands from time to time, so that now over 2000 square miles is owned by the state and known as the *Forest Preserve*

Farming. — The farmer usually engages in both agriculture and stock raising. The fertile valley regions he uses for raising crops of grain, vegetables, or fruit, while the hills and rough places, which are not so good for agriculture, he uses as pastures for his cattle and other stock. Fully half of the area of New York is devoted to farming. There are

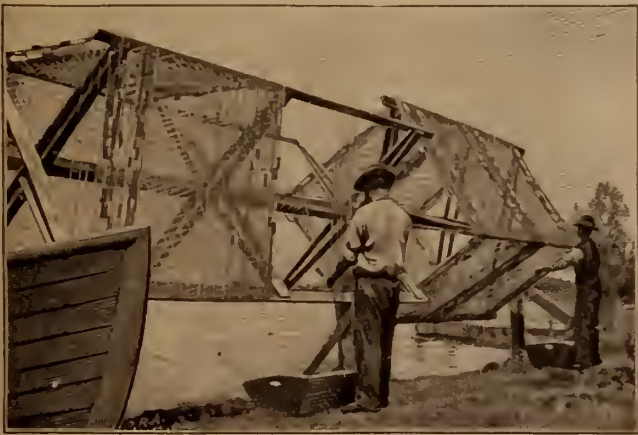


FARMING IN NORTHERN NEW YORK.

over 200,000 farms, and they average each about 100 acres in area. The state is one of the leaders in agriculture, as in so many other respects. The farms of the state are valued at over \$1,000,000,000, and their products in one year are worth a quarter of this sum. Only the three states of Illinois, Iowa, and

Ohio stand ahead of New York in either of these particulars. The leading farming counties are St. Lawrence, Steuben, and Erie.

Fishing. — New York is excellently situated for the pursuit of fishing either as a sport or as an industry.



DRYING FISH NETS — LAKE ONTARIO.

Lakes Erie and Ontario, the St. Lawrence, the Niagara, and the inland rivers and lakes, the Hudson, and the salt water about

Long Island, all yield great quantities of fish. The Lake Erie fisheries are said to surpass those of any other body of fresh water in the world. Here fishing is done either from small boats, from the shore, or, in the winter, through the ice.

The state government has made laws fixing the times of the year when certain fish may be taken and the manner in which they may be caught, whether by line or net or spear. Fish

hatcheries are maintained, where young fish are raised and the waters of the state stocked with millions of them every year.

Mining and Quarrying. — Although New York is not known as a mining state, the following industries are important: mining for iron and a few other



SALT WORKS.

metals; quarrying for stone and other minerals; drilling for oil or natural gas; mining for salt or getting it from the great salt marshes.

Manufacturing. — But the products of all these industries are of little value until they have been manufactured into articles of use to us in our daily life.

Lumbering, mining, and quarrying lead to manufacturing. Of little use are the timber and boards until fashioned into

thousands of articles from a sheet of paper to a steamboat ; of little use is the iron ore until melted, refined, and shaped into its many forms from a needle to a locomotive ; of little use is the marble until converted into its countless products from a paper weight to a city hall. Even fishing and farming lead to manufacturing. Fish are salted and preserved as food, or their oil is extracted. Grains are ground to flour, vegetables and fruits are dried or canned, hops are used in making beer, and tobacco is made into cigars ; and from live stock are produced butter, cheese, condensed milk, and even canned meats, leather, and buttons.

New York stands far in the lead in the matter of manufactures. The total value of the products is so great that an exact statement of the number of dollars would give no idea of it, as it reaches far up into the billions.

Occupations.—While the industries just described employ a great number of the people of the state, it must be remembered that certain other occupations are necessary in any civilized community. So that we find here a great army of lawyers, doctors, ministers, teachers, engineers, journalists, clerks, railroad men, and others.

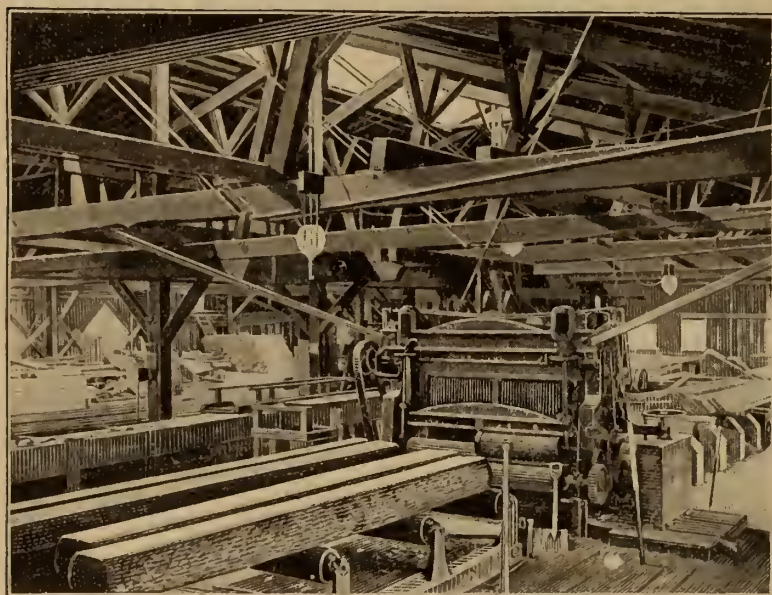


OLDEST SAWMILL IN THE STATE.
BUILT IN 1805.

PRODUCTS

Let us now consider the products of each of these industries in turn.

Forest Products. — The forests in New York yield products which in a single year reach a value of nearly \$16,000,000.



INTERIOR OF A MODERN SAWMILL.

The trees, as hewn and trimmed by the ax of the woodman, are taken to the sawmill where they are further trimmed into beams, sawed into boards, planed into various forms, or cut into shingles, or into hoops, staves, and headings for barrels. The prod-

ucts of the sawmills and planing mills go to the hands of the builder or the manufacturer.

Agricultural Products. — Among the leading groups of agricultural products are the *cereals*. In the production of buckwheat New York has first place, raising over a third of the total crop of the United States. Great quantities are produced throughout the Allegheny Plateau. In the value of the rye crop, which comes largely from the Hudson Valley counties, Wisconsin and Pennsylvania are the only states that outrank New York. Oats, wheat, and corn are also produced in large quanti-

ties. Another group of important products is the different kinds of *hay*. Kansas and Iowa are the only states that yield a larger amount than does New York.

As to *vegetables*, more than a tenth of the entire United States crop is raised in New York. New York has



A VEGETABLE FARM.

first place in the production of potatoes, onions, sweet corn, cucumbers, cabbages, and several other varieties.

Over a third of all the hops in the United States comes from New York, and millions of pounds of tobacco are raised annually. The maple, in addition to furnishing a valuable timber, is raised for its sap to such an extent that New York produces more maple sugar than any other state except Vermont.



GATHERING GRAPES.

In the raising of *fruits*, New York is second only to the famous fruit state of California, and in the raising of apples it holds first rank. Millions of pounds of fruits are evaporated for the mar-

ket, and cider and vinegar are among the important products of the state. The counties bordering on the Ontario are famed

for their orchards, and grapes and other small fruits are raised in enormous quantities.

Agriculture includes, too, the cultivation of fruit trees, plants and trees for ornamental purposes, and the raising of farm and garden seeds, and here also New York is the leader, the lower Hudson and Long Island counties selling nearly \$3,000,000 worth of nursery products annually. Near the city of Rochester are nurseries, said to be the largest in the United States.

Live Stock. — We have seen that the farmer finds it profitable to devote his hilly or rough land to stock raising. In a single year the farmers of the state have sold over \$15,000,000 worth of live animals. In the value of the various dairy products — cattle, milk, butter, cheese — New York is the first state of the Union. Enough milk is produced in a year to sup-



TROUT FISHING.

ply every person in the state with more than a hundred gallons. In poultry raising the state has high rank, and in the culture of bees New York is surpassed only by Texas in the value of its honey and wax.

Fish. — The chief products of the fishing industry are herring, sturgeon, trout, whitefish, catfish, pike, and perch, from the border waters; trout, bass, pike, perch, and pick-

erel, from the inland waters; shad from the Hudson; and in the salt water about Long Island are captured great quantities of bluefish and mackerel; menhaden are caught off the eastern shore; and the bays are worked for lobsters, oysters, and clams — the famous Blue Point oysters come from the vicinity of Blue Point on the Great South Bay.

Minerals. — As to the mining industries, iron is the only metal found in any quantity. Fine iron is mined in the Champlain district, in the Highlands, and at various scattered points in other regions.

In quarrying, over \$4,000,000 worth of buildingstone was taken out in 1900. Granite is found throughout the



A BRICKYARD.

Hudson region, marble in the northern and eastern counties, blue-stone in Ulster, and limestone in nearly every section. The hard sandstone from Potsdam is used for paving; the only place in the country where red slate is found is Washington County; and cement is widely distributed, being found in Erie, Onondaga, and Ulster counties. Along the lower Hudson large clay beds have developed one of the greatest brick-making centers of the world.

Petroleum is found at many places, chiefly in Allegany and Cattaraugus counties. From Olean the oil is pumped through pipes to distributing points as distant as Buffalo and Long Island City. Natural gas is found in the central and southwestern

parts of the state, and is used in Buffalo and other places for lighting, cooking, and heating.

In the production of salt, New York has held first rank since 1893. Salt springs of great value are in Onondaga, Wyoming,



CONGRESS PARK, SARATOGA SPRINGS.

and Genesee counties; and in recent years rock salt has been mined in Livingston County.

Mineral springs, valuable as medicine, are found throughout the state, some of the best known being those

at Saratoga, Richfield, Sharon, and Avon. The village of Saratoga Springs, located two or three miles from the Hudson, is the most famous watering place in the United States. Its population of 12,000 is more than doubled during the summer months by visitors to the hotels, attracted largely by the wonderful mineral waters.

Manufactured Products. —

The products of manufacture are almost countless. The leading branch is the manufacture of textiles, the products of which exceed a fifth of the entire manufactures of the state. The



VIEW IN SARATOGA.

manufacture of food and like products comes next in importance, followed by what are known as "hand-trade" products. In the manufacture of metals other than iron and steel, New York is the first state, and in this connection it is interesting to note that New York's production of confectionery is now greater than that of iron and steel. The state is first also in the manufacture of lumber products, of chemicals, of liquors and beverages, of tobacco, and of paper and printing. Very extensive, too, are its shipbuilding, and its manufactures of clay, glass, and stone, of leather, and of vehicles used in land transportation.



SARATOGA LAKE.

COMMERCE

It is not enough that the different industries shall take the resources of the earth and change them into useful products. These products must next be *exchanged*, so that each person may work at his occupation and trade off his products for other things which he needs but does not make himself. This exchange we call Commerce, and here, too, nature has done much for New York in determining the routes by which merchandise of various kinds can be most easily transported from one point to another.

Modes of Transportation. — We have noticed that the state is cut in many directions by valleys, which are of the greatest importance as routes of travel. Along these lines the exchange of farm products for the products of the factory, and the products of one town for those of another, has been made for years and years. Roads were early built, that men and produce might



A HUDSON RIVER STEAMBOAT.

travel horseback or in wagons. Steamboats were run on the navigable waters. Then in some cases where the rivers could not be used for purposes of commerce canals were built. Later came the “iron horse,” ready to haul along

steel rails great numbers of wagons or cars at a speed far greater than ever before attained.

Routes of Transportation. — One feature of New York's surface gave the state a great opportunity to grow in commercial strength. Year by year the American colonists pushed their settlements farther and farther into the great West and Northwest. Year by year their products increased until they had more than they could dispose of near at hand. Then, naturally, they sought the chance to trade with the people of the Atlantic Slope, and even with the European nations. To carry on this export trade it was necessary that in some way their products should reach the Atlantic coast. Many seaboard towns with their excellent harbors — Boston, New York, Philadelphia — were good ports when once reached; but how to reach them?

For hundreds of miles there was no break in the Appalachian Highlands through which the loaded wagons might be sent to the coast, but well toward the northern end there was the cut formed by the St. Lawrence and Mohawk valleys. Once through this opening, to the right, lay the navigable Hudson, inviting commerce to its mouth port, — New York. Thus New York city became the great American port, and New York state the commercial leader of the Union.

Roads. — The means by which commerce has been carried on are the waterways — natural and artificial — and the roadways, either open roads or railroads.

In the construction of roads for ordinary use great progress has been made. At first, a road was hardly more than a widened trail through the woods, but from that small beginning has gradually



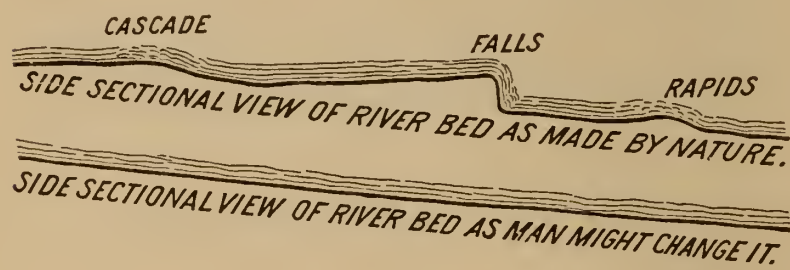
AN OCEAN STEAMER.

come the miles of well-built roads that to-day are found all over the state. Especially as the bicycle and automobile have come more and more into use, the greater has been the need for smooth and lasting roadways, so that the length of these improved roads is daily increasing.

Water Routes. — The easiest kind of route for man to establish is a boat line, for nature has provided the “roadbed,” as it were,

and man has only to furnish the vehicles. Steam, of course, is almost entirely used to-day as the motive power, and so we find steamboats plying regularly on all of the important inland and border rivers and lakes. The great shipping center, not only of New York state, but of the western hemisphere, is the port of New York city. Thence the vessels go out to the north, the east, and the south. Many of the steamboats are of great size and speed and as comfortably and richly furnished as any hotel.

Canals. — We have already remarked that many of the valleys are traversed by unnavigable streams. While large boats may readily sail up the Hudson, their farther progress — up through the Mohawk Valley — is made impossible by the shallowness of the Mohawk River and its rapids and falls. Again, even if this river were navigable, there are many breaks in the chain of rivers and lakes as you cross the state. Large ditches might be built to connect these, you may say. Yes, but they could not be laid out across entirely level country, and they would soon become

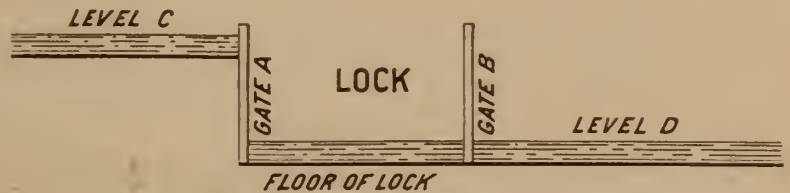


rapid-flowing rivers. Even were a river bed dredged and the river thus deepened and the falls cut out, it would still remain

unnavigable on account of the swiftness with which the water would flow. Thus it was necessary for man to devise some kind of artificial river, on the plan of a large ditch, and to find some method by which boats could be taken easily from one level to another. What he did contrive was a form of “lock”

by which a boat as it stands in the water can be raised or lowered from level to level—made, in fact, to go uphill or downhill. If you study carefully the following description, you can understand how this is done.

If a boat is to be taken from level C to level D (downhill), gate B is closed; water from level C is admitted until it stands in the lock as high as it does on level C;



gate A is opened and the boat floated into the lock; gate A is

closed; the water in the lock is let out gradually into level D, so that it falls slowly to the level of that in level D; gate B is

opened; the boat now passes out on level D and is drawn on until another lock is reached. To go uphill from D to C the operation is reversed: B is opened: the boat goes into the lock; B is closed; water is gradually admitted into the lock from C: A is then opened and the boat is on level C.

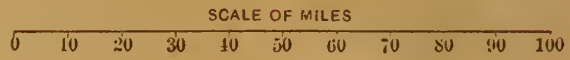


CANAL LOCKS, LOCKPORT.

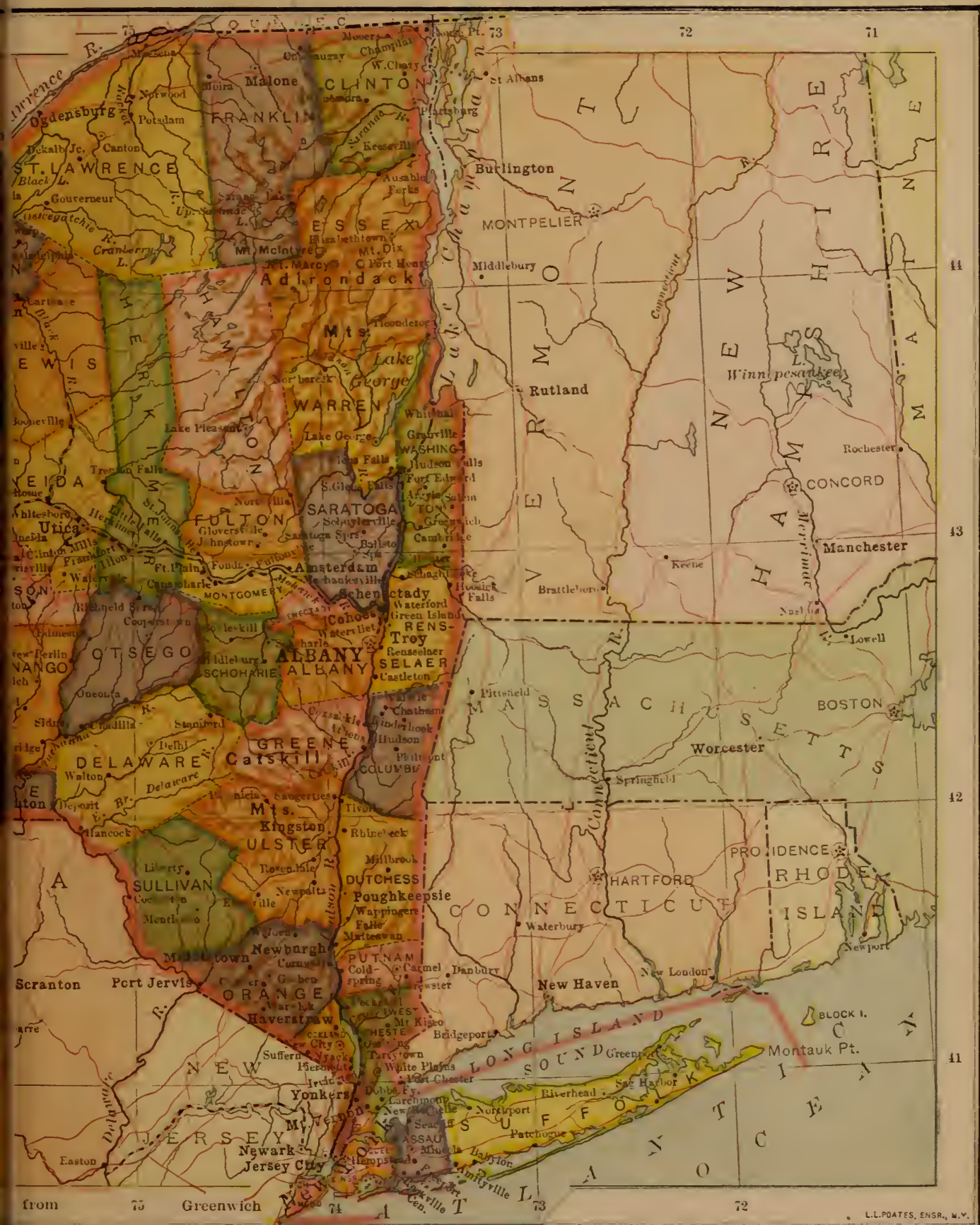
It was on April 15, 1817, that the legislature of New York, under the leadership of Governor Clinton, voted to build the Erie



NEW YORK



County Towns Railroads Canals



Canal, from Albany to Buffalo. In spite of the ridicule which greeted the "Big Ditch" on all sides, it was completed by October 26, 1825. Since then the canal has been used constantly except during the winter, when navigation is closed, and has been improved from time to time in many respects. The original length of 363 miles has been reduced to 352, the number of locks from 83 to 72, and the canal and locks have been enlarged so that larger boats may be used. It is proposed to expend many more millions of dollars to enlarge and improve the canal, in order to permit the floating of more modern freight vessels. The Erie Canal fixed the path of commerce from the West through the state of New York, and made the city of New York the chief port for foreign shipment. In addition, many thriving towns have been developed all along the route of the canal.

Other canals, which, like the Erie, have been constructed by the state, are: the Champlain Canal, the Black River Canal, the Oneida Lake Canal, the Oswego Canal, and the Cayuga and Seneca Canal.

These canals, all of which, since 1884, have been free for any one to use, carry over 3,000,000 tons of freight annually, of which two thirds goes eastward and one third westward.



FIRST RAILROAD TRAIN.

Railroads. — Within six years after the completion of the Erie Canal the first railroad in New York was run between Albany and Schenectady. Since then the building of railroads has been steadily carried forward, so that to-day over

8500 miles of steam roads are operated in the state. The roadbed and rolling stock have been greatly improved. One may now board a train at one end of the state in the morning and arrive at the other before evening; throughout the entire trip, during which he has had at his command the comforts of parlor and dining room, he need not leave his train.



Through courtesy of N. Y. C. & H. R. R.R.

A MODERN RAILROAD TRAIN.

The chief railway systems of the state are: the New York Central and Hudson River, and the Erie, each operating over 800 miles of road; the West Shore, the Rome, Watertown, and Ogdensburg, and the Delaware, Lackawanna, and Western, each with over 400 miles; and the Long Island, and the New York, Ontario, and Western, with about 300 miles each.

It will be seen that the same natural routes which have been used by canals have been used by the railroads, and that the railroads generally follow the valleys whenever they can. Man has not, however, followed these highways of nature altogether, but has daringly laid his iron rails *across* the mountain ridges, cutting through the mountains or building long bridges over the valleys between.

The main line of the New York Central follows the east bank of the Hudson from New York city to Albany. Here it turns westward through the Mohawk Valley and follows very closely the route of the Erie Canal to Buffalo.

The West Shore runs along the west bank of the Hudson, and from Albany to Buffalo along a route about the same as that of the Central.

The Rome, Watertown, and Ogdensburg skirts the shore of Lake Ontario and connects with many summer resorts on the Lake.

The Erie, completed in 1851, is a wonderful piece of engineering work. Its original western terminus was Dunkirk, on

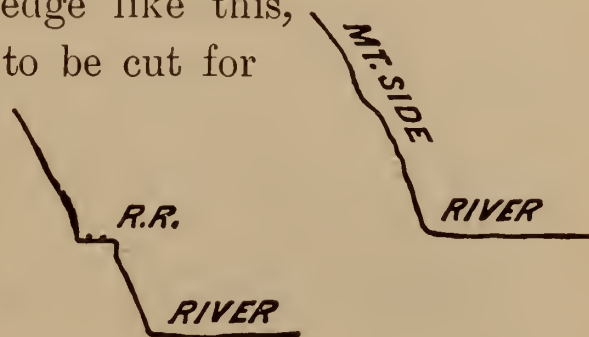


VIEW ON THE ERIE RAILROAD.

Lake Erie. It now runs west to Chicago, and has branches to Buffalo and many other points. If you follow the Erie from Jamestown, a handsome city on Lake Chautauqua where the road makes its western connections, and continue to New York,

you will notice how it has to cross all five of the river systems of the state, and yet how it does this almost entirely by following up or down the river valleys. First it travels up the Allegheny (Mississippi system), then down a branch of the Genesee (St. Lawrence system), then up the main stream, and finally up an eastern tributary, passing out of the Genesee Valley, at an altitude of nearly 1800 feet, into the Susquehanna system, by way of the valley of the Canisteo River. Next it goes down

the Chemung, then up the Susquehanna, then crosses the divide into the Delaware watershed, following very closely the Delaware River for the entire length of its boundary between New York and Pennsylvania. At Port Jervis the road turns eastward to climb over the Shawangunk Mountains down to the valleys of the Hudson River system. In many cases, where the mountains come down to the river's edge like this, the roadbed for the railroad had to be cut for miles out of the solid rock, thus



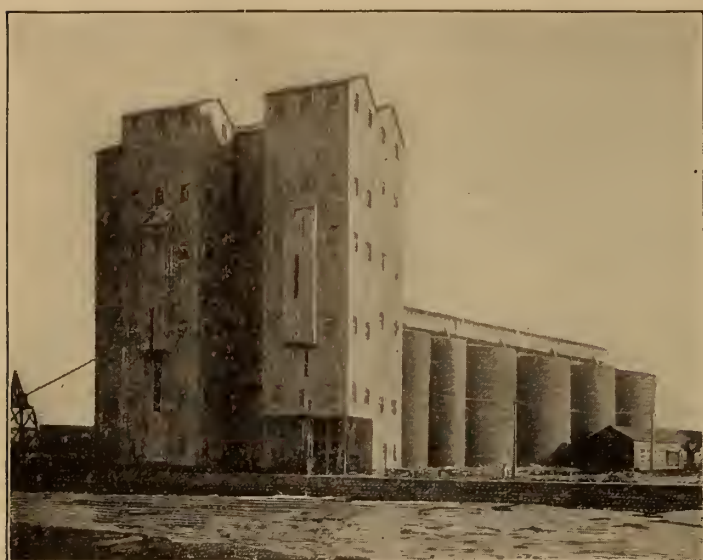
The New York, Ontario, and Western follows the tracks of the West Shore from Weehawken to Cornwall. From here it strikes westward across Orange County to the mountains and lakes of Sullivan and Delaware counties, and beyond to the city of Oneida, where it again connects with the West Shore, and also with the Central.

The Long Island Railroad runs from Brooklyn, in New York city, throughout the length of the island along both the north and south shores and also through the middle of the island.

The last few years have seen great progress in the use of electricity, which has taken the place of horses as power for street railroads, and replaced steam for local travel between neighboring towns. Over 1300 miles of such roads are operated in New York. In some cases the power is led through underground wires, in others by overhead wires, and in others, mainly on elevated street railways, by a third rail alongside the tracks.

MANUFACTURING CENTERS

In New York, as in every other state or country, the people have gathered themselves together into villages or into cities, which are really only villages of a larger growth. In some cases this is because these particular places were better fitted for carrying on manufacturing; in other cases because they made good



GRAIN ELEVATOR, BUFFALO.

centers for trade. All of the cities and many of the villages now are both manufacturing and commercial centers. But most of them owe their first growth to one only of these causes. The cities of New York are forty-nine in number. In order of their rank as manufacturing centers the leading

ten are: New York, Buffalo, Rochester, Syracuse, Troy, Albany, Yonkers, Utica, Binghamton, Cohoes. New York is by far the greatest of these—so much so that we are to devote nearly one half of this book to that city.

Buffalo, at the western end of the state, has immense manufactures of iron, steel, brass, and copper goods, machinery, lumber, oil, flour, sugar, beef, leather, shoes, etc. Slaughtering and meat packing are extensively carried on. In the neighborhood of Buffalo are the manufacturing cities of Niagara Falls, Lockport, and

North Tonawanda, and the scarcely less important village of Tonawanda.

Rochester, too, has many millions of dollars invested in manufacturing, over a third of which is in the manufacture of boots and shoes and men's clothing. Flour, beer, tobacco, furniture, and photographic goods are among the other products.

Syracuse not only has high rank as a manufacturing city, but it is rapidly growing. Men's clothing, machinery, manufactures of iron and steel, and malt liquors are the leading products. Auburn, to the southwest, and Oswego, to the northwest, are both important manufacturing cities.

Between Syracuse and Troy are the cities of Rome, Utica, Little Falls, Gloversville, Johnstown, Amsterdam, Schenectady, and Cohoes, all important centers of manufacture.

Troy and *Albany*, only six miles apart, are extensive manufacturers of machinery, mathematical instruments, and shirts, collars, and cuffs.



Copyright, 1900, by Detroit Photographic Co.

SALINA STREET, SYRACUSE.



A COLLAR SHOP, TROY.



A STREET IN ITHACA.

Between Albany and New York are the cities of Hudson, Kingston, Poughkeepsie, Newburgh, Yonkers, and Mt. Vernon, all engaged in manufacture.

In the south central part of the state is a group of manufacturing cities, including Ithaca, Hornell, Corning, Elmira, and Binghamton. The last two are the most important and have large flour mills, rolling mills, tanneries, breweries, iron works, car shops, and factories of many kinds.

COMMERCIAL CENTERS

We next consider the cities as commercial centers. The leading lake ports are Buffalo and Oswego. Buffalo is called the "Queen City of the Lakes"; for not only is it one of the most important cities of all the Great Lakes, but, with its broad, well-paved, and beautifully shaded streets, its many artistic residences, its well-kept lawns, its substantial public buildings, and its system of public parks, it is one of the handsomest cities of the northern country. It has a water front of seven miles



NORTH STREET, BUFFALO.

on lake and river, and its harbor, protected by breakwaters, is one of the finest on Lake Erie. As a lake port, as one terminus of the Erie Canal, and as the junction of a score of railroads, it has an immense trade, especially in live stock, coal, and lumber. Grain is brought in enormous quantities from the West and stored here, and later reshipped to its final destinations.

Dunkirk, also a manufacturing city, has a large Lake Erie trade.

Oswego is the chief port on Lake Ontario. It has an excellent harbor, protected by a large breakwater, and has miles of wharves and many large grain elevators. It has a large trade with Canada in lumber and grain and in coal, which comes across the state from Pennsylvania. Its importance dates back to the days of the French and Indian War, when



THE HARBOR AT OSWEGO.

the English fort was captured, in 1756, by General Montcalm.

All the cities along the line of the Erie Canal and the Central and West Shore railroads are important trading centers. The Mohawk Valley is famous as a dairy region, and besides its immense exports of butter and cheese, hops and broom corn are raised in large quantities. To the west is the great grain and fruit producing region about the Finger Lakes and the Great Lakes. The products of the farms for miles around are brought

to the cities, where they are shipped by canal or railroad just as they are, or after they have been manufactured into other products.



LOWER FALLS, ROCHESTER.

At Rochester, the Erie Canal crosses the Genesee River on a great bridge of cut stone over 800 feet long. Rochester is connected by a branch of the Pennsylvania Railroad with the plateau region to the south, so that the city is the center of trade for the whole Genesee Valley.

Syracuse is a railroad

center, and here the Oswego Canal connects with the Erie.

Rome is an important market for cheese and lumber.

Utica, beautifully located on a slight elevation, is the metropolis of the Mohawk Valley and a busy railway and canal center. It is the most important cheese market in the United States.

Schenectady is an important railroad center from which the Delaware and Hudson Canal Company runs



CANAL BRIDGE, ROCHESTER.

trains to Lake George and Lake Champlain and southwest to the famous summer resorts in Schoharie and neighboring counties.

Albany, the capital city, with its population of 100,000, is located a few miles below the mouth of the Mohawk and at the junction of the Erie and Champlain canals, near the head of the Hudson River navigation. It is connected by rail with New York, Boston, Montreal, and Buffalo, and has



GOVERNOR'S RESIDENCE, ALBANY.

always been a city of great commercial importance. It is the greatest lumber market in this part of the country. On the opposite bank of the Hudson from Albany, connected by a railroad bridge, is the city of Rensselaer, formerly East Albany.



THE POUGHKEEPSIE BRIDGE.

Troy has excellent commercial advantages, connected as it is by canals with Lakes Champlain, Erie, and Ontario, and located near Albany and its railroad systems. Opposite Troy is the city of Watervliet, where the lumber trade is the chief industry. At Watervliet is located a United States arsenal.

At *Poughkeepsie*, an important railroad junction, the Hudson is spanned by an immense bridge. Trains passing over

this bridge connect the Pennsylvania coal region with New England.

Newburgh is one of the leading commercial cities on the river, dealing in the produce of the rich farm lands to the west.



WASHINGTON'S HEADQUARTERS AT NEWBURGH.

In Newburgh is located the Hasbrouck House, famous as the headquarters of Washington during the last years of the Revolution. Many relics of the War of Independence are to be found in the house and on the surrounding grounds, now preserved as a state park. New-

burgh is connected by ferry with Fishkill.

The most important of the many railroad centers of south central New York are *Binghamton* and *Elmira*, trading largely in flour, lumber, and coal.

ADVANTAGES OF LOCATION

But it must be remembered that good reasons fix the location of all cities, and that they do not grow up at random. Even if you did not know that there is a city called Buffalo, as soon as you had learned of the Great Lakes and the many people that live near and beyond them, and of the remarkable valley that extends from Lake Erie across New York to the

Hudson River, you would expect to find a large city on the lake at the head of the valley. And, further, you would expect to find it at that point on the lake shore which has the best harbor for trading boats.

Again, we have seen that in the Genesee River are great falls which can be used to run machinery. And at this point on the river has grown up the city of Rochester.

The city of Syracuse owes its first growth to the salt springs in the neighboring marshes which were known to the Indians, it is said, as far back as 1653.

These cities and those of the Mohawk Valley all owe their later rapid growth to the building of the Erie Canal and then to the railroads, which enabled them to ship their products to distant markets and to develop into great commercial centers.

Many other centers owe their manufacturing importance to waterfalls — among



COHOES FALLS.

them, Niagara Falls, Cohoes, Glens Falls, Little Falls, Fulton.

Then there are the cities on the Hudson. Kingston, for example, is the most convenient point at which the bluestone from the quarries to the west can be taken and shipped down the river. Large quantities of ice taken from the Hudson are shipped from this port. Again, Kingston is the natural southern

gateway to the popular Catskill Mountain region, and so it gains prominence as a railroad center.

At the junction of the Chenango and Susquehanna rivers, in the center of that fertile alluvial plain, there could not fail to grow up a town of importance as a manufacturing and trading

center — Binghamton.

Olean and Wellsville became important on account of the great oil field in the neighborhood.

These instances are enough to show you that cities do not spring up by chance. In every case, the large city has had some



BINGHAMTON.

great advantage of location — near powerful waterfalls, near natural waterways, or perhaps at the junction of two of them, or at the central point of an extensive farming district, or near natural resources.

SOCIAL DEVELOPMENT

The Early Settlers. — Think of the early settler in New York as he pushed into the woods, cleared the trees off a little tract of land, built a log cabin, and became farmer, fisherman, quarryman, and manufacturer, all in one. He and his family raised their own grain, vegetables, and fruit; they trapped game, caught fish, raised stock; they made their own cloth and manu-

factured their own clothing and whatever else they needed in their daily life. Soon, however, others settled near them, and then each man began to devote himself to doing the thing he was best fitted to do. If he could shoe horses, he set up a blacksmith shop; if he could make clothes, he set up a tailor's shop; if he was a miller, he built a mill at a convenient waterfall, and



LOG HOUSE.

ground into flour the grain which the farmers brought him. Others devoted themselves to carpentry, others to masonry, others to manufacturing of one kind or another.

Naturally these different people grouped themselves together in a village, and then was established the village store, where one could make a great variety of purchases—an iron pail, a lace handkerchief, dried fish, or a box of axle grease.

The doctor and the minister and the lawyer settled in the village, and schools and churches were built. Before many years elapsed, the little village grew to a large town, or perhaps, if it was fortunately located so that railroads or waterways made it a commercial center, it became a great city.

Country Life.—All this while, many other people preferred to remain in the country, making their living as farmers, so that to-day, within the state of New York, we find miles after miles of rich farm land and again hundreds of cities and villages.



MODERN FARMHOUSE AND BARN.

And how different is the farm life from that of the city! The boy who lives on the farm gets up very early, — perhaps at four o'clock in summer, — helps with the “chores,” milking the



A COUNTRY SCHOOLHOUSE.

cows; feeding the horses, cattle, pigs, and chickens and other live stock; fetching water from the well or spring, carrying it by the pailful several rods to the house; and bringing in great armfuls of firewood. The farmer's family, with perhaps a “hired man” or two, are the only persons living in the good-sized,

two-story house, and the nearest neighbor is probably a quarter of a mile away — often farther. After breakfast, the boy, with

his lunch pail in hand, will trudge a mile or so to school. The schoolhouse is a one-room frame building, and if there are twenty pupils present, it is considered a large attendance. If the country boy wishes to mail a letter or get any mail which may have been sent him, he often has a long walk or ride to the nearest village post office. If he goes out for the evening, unless it is a bright moonlight night, he will have to carry a lantern or fasten one on his carriage or sleigh. But he usually gets to bed early so as to rise the next day with the sun.

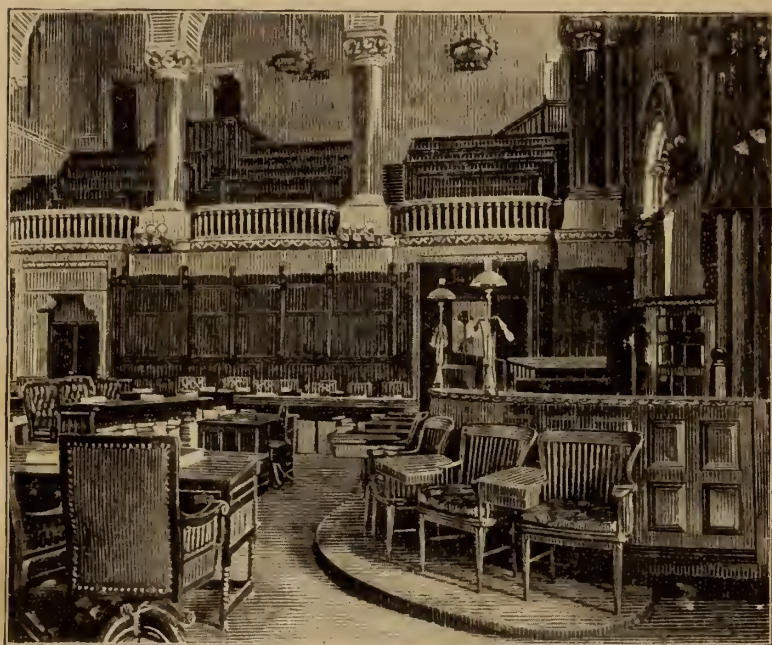
City Life. — What a different story is the life of the city boy or girl, who lives perhaps in a house not more than twenty feet wide, with other houses close up on each side, and maybe with a back yard some forty feet long, or else in an “apartment” or “flat” house where from three to a dozen families all live. In this case each family has some half-dozen rooms where its daily life is carried on. The city boy’s “milking” is not more than going to the front door and taking in the bottle or pail of milk which the milkman left there; there is no fetching water, because the city reservoir supplies every house; there is probably no firewood to bring in, because coal or gas is generally used as fuel. And so the city



AN APARTMENT HOUSE.

boy has few "chores," and he does not get up so early as his country cousin. The school which he attends may be but a few rods away — a four-story building of brick and stone with 2000 or more pupils in daily attendance. Living so near the school, he can go home to his lunch. If he wants to call on his friends or go "down town" to the large shops, he can go by street car, electric or cable, or perhaps by an elevated road or a "subway." If he goes out at night, he finds the streets well lighted with public lamps, and there are many places of amusement open every evening. His letters are brought to his house by a letter

carrier, who makes several trips a day, and to mail a letter requires but a few steps to a letter box.



THE SENATE CHAMBER AT ALBANY.

GOVERNMENT

In every government a few of the people are selected to make laws for the good of all and to see that

those laws are obeyed. The government of the state of New York, like that of the United States, has three branches. First, there is a legislative branch consisting of a Senate of 50 members and an Assembly of 150 members, elected by the people of the various districts into which the state is divided. The legis-



THE STATE CAPITOL.

lators make the laws for the state. Second, there is the executive branch, consisting of a governor and other state officers who are elected by all the people of the state. The governor, who appoints many assistants, sees that the people obey the laws. Third, there is a judicial branch, consisting of judges and other officers of the courts, all of whom are elected by the people. The duty of these is to settle disputes about the laws, and also to punish people who break the laws, thus administering justice to all the inhabitants of the state.

Besides this state government, each county has a government to look after matters which relate only to its own county

— a board of supervisors for law-making, a sheriff and other officers for law enforcing, and county courts for law judging.

As each county is divided into towns, there is another set of officials to attend to the matters of purely town government, and in the same way each of the cities of the state has a city government.

The headquarters of the state government is in the capitol building at Albany. This magnificent granite structure, located on the principal height of the city, is visible for miles around.

EDUCATIONAL CENTERS

One of the causes of the importance of New York state is the attention given to education. To-day not only has every



COLUMBIA UNIVERSITY.

child an opportunity of getting a free schooling, but he is compelled to go to school whether he and his parents wish it or not. Forty millions of dollars is spent upon public education every year. Throughout the state are more than eleven thousand coun-

try schoolhouses. In the larger villages there is usually what is known as a Union School, which contains a high-school department. In the cities, boards of education make laws and requirements suited to the needs of the local schools.

Besides these, there are the colleges, most of which are private institutions, in which the students pay for their instruction. When a student graduates from a college or university he receives a diploma on which is written the degree or standing which he has attained. In New York there are twenty-seven colleges that confer degrees on their graduates.

Of these colleges, Columbia University, organized as King's College in 1754, the largest in the state, is situated on Morning-side Heights in New York city. New York University, organized in 1831, situated on University Heights, and the College of the City of New York, organized in 1848 as the New York Free



Copyright, 1900, by Detroit Photographic Co.

CORNELL UNIVERSITY.



VASSAR COLLEGE.

Academy, are the next in size and importance in New York city. Cornell University, beautifully located at Ithaca, on Cayuga Lake, is the second college of the state. Poughkeepsie is the seat of Vassar College, one of the leading schools in the United States for the education of women.

There is at Albany the State Normal College which prepares its pupils to become teachers, and eleven normal schools at different points throughout the state carry on the same work.

At West Point, commanding the Hudson to both north and south, is the United States Military Academy, which is governed



UNITED STATES MILITARY ACADEMY, WEST POINT.

by the War Department of the United States. Here young men are trained to become army officers, and each graduate receives a second lieutenant's commission in the regular army.

But schools are not the only educational institutions. At Albany are located the State Museum and the State Library, containing thousands of volumes. There are many other large and important libraries, all of which, together with museums and other opportunities to increase one's knowledge, do their great work in the education and refinement of the people.

This study of our state, though brief, will serve to show how well New York merits its proud title of Empire State.

THE CITY OF NEW YORK

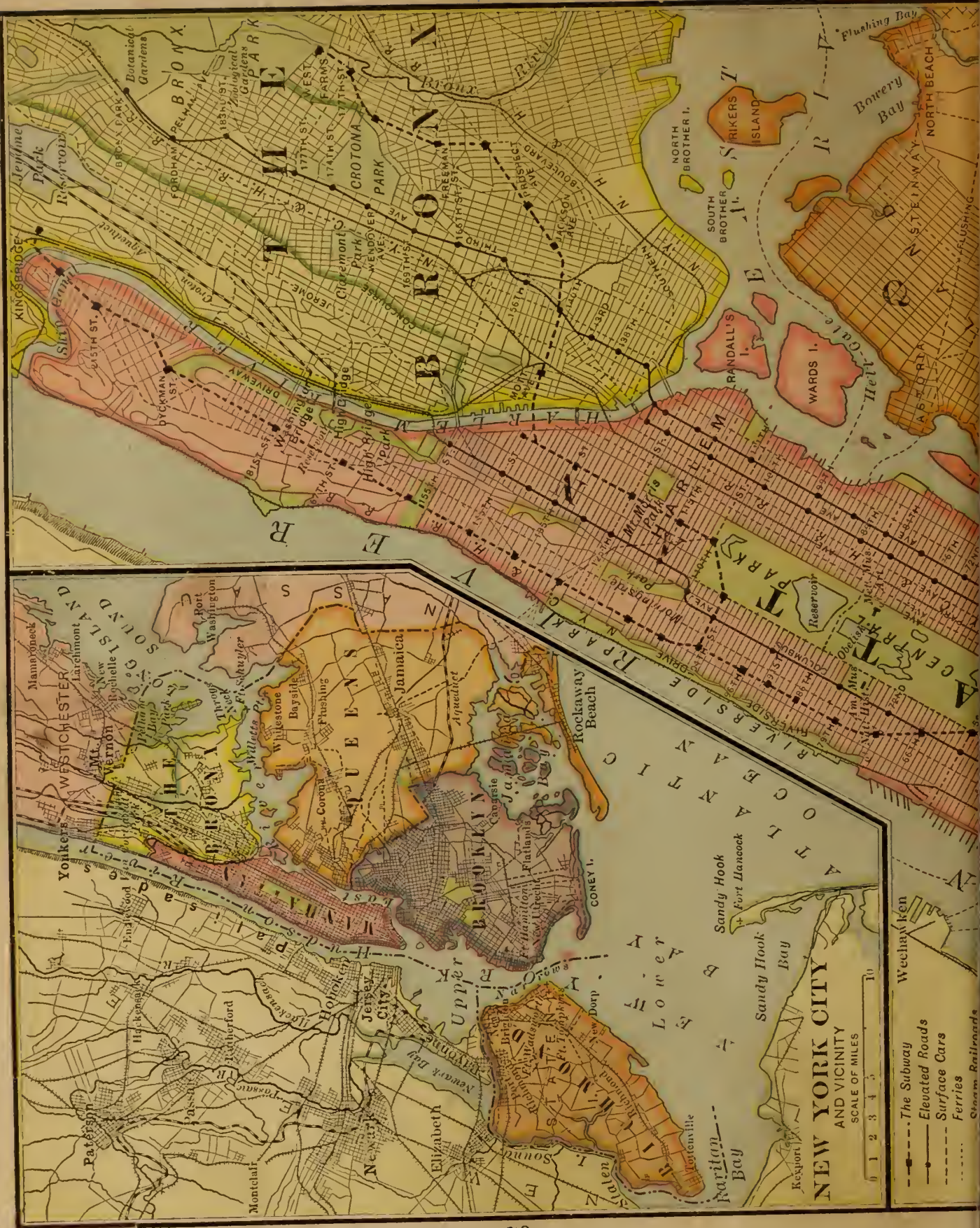
INTRODUCTION

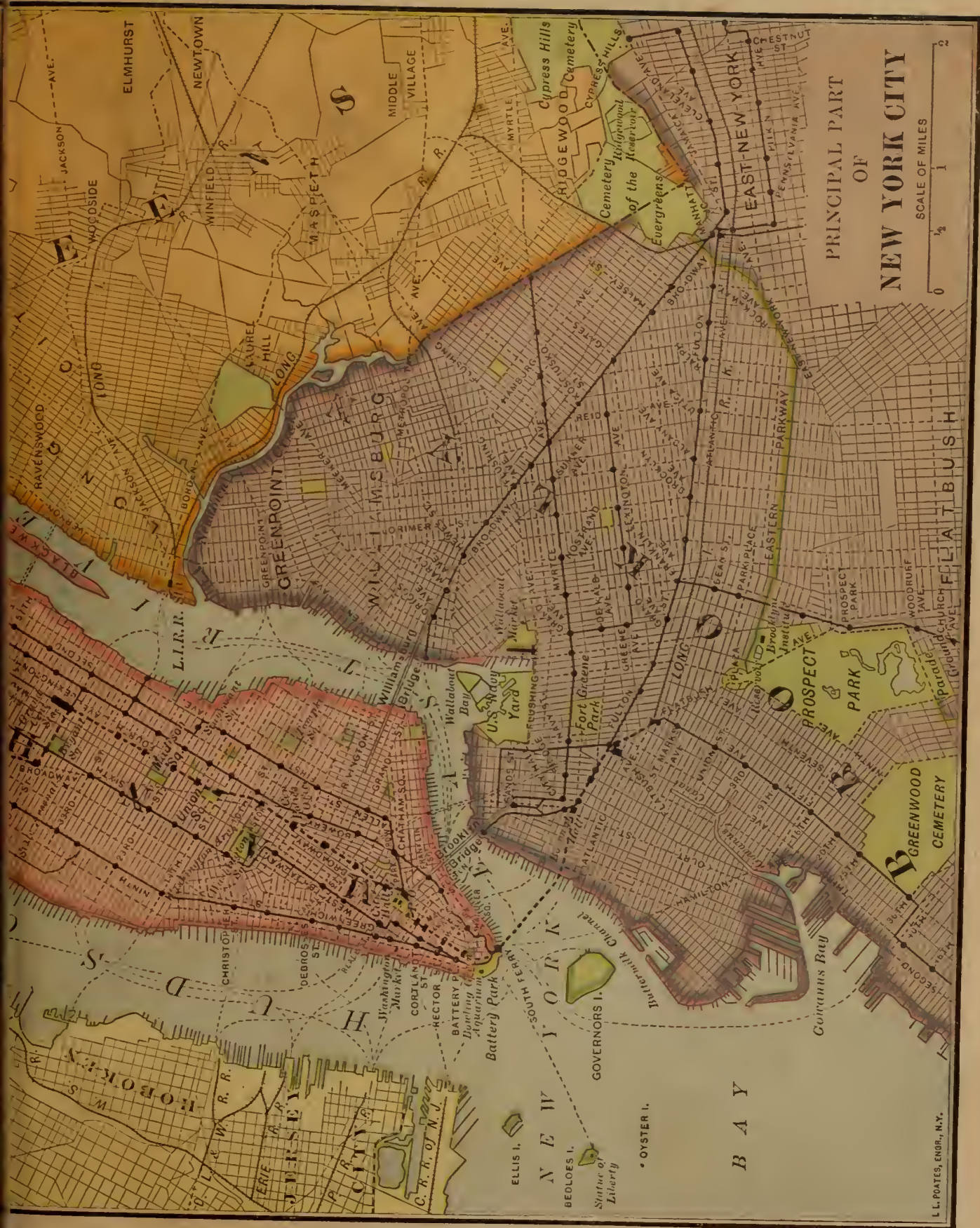
THE city of New York is divided into five boroughs.

The borough of **Manhattan** includes all of Manhattan Island, whose northern boundary is the Harlem River. It includes also Governors, Bedloes, Ellis, Oyster, Blackwells, Randalls, and Wards islands. The borough of **The Bronx** lies north and east of Manhattan and extends to the northern limits of the city. The borough of **Brooklyn** covers the area of Kings County, and is the old city of Brooklyn. It is surrounded by the East River, the borough of Queens, New York Bay, and the Atlantic Ocean. The borough of **Queens** extends from Brooklyn to Nassau County on the east. The borough of **Richmond** comprises all of Staten Island.

The city of New York is governed by a mayor, who is assisted in each borough by a borough president.

The area of the city is 318 square miles, of which the largest borough, Queens, covers 124 square miles, and the smallest, Manhattan, 22 square miles. The vast city has 4,767,000 people, about half of whom are in the little borough of Manhattan. Richmond has the smallest population, although it outranks in area both the borough of Manhattan and the borough of Brooklyn.





PRINCIPAL PART
OF
NEW YORK CITY

SCALE OF MILES
0 1/2 1 2

L. L. POATES, ENGR., N. Y.

NEW YORK CITY AS AN INDUSTRIAL AND COMMERCIAL CENTER

Although we generally think of New York as a city chiefly devoted to trade or commerce, we must not lose sight of the fact



LOADING GOODS FOR EXPORT.

that it is a great industrial center as well.

Of course the industries common in the rural parts of the state are not found here to any great extent, although it is true that within the limits of the city of New York we do find good fishing, and even some farming is still done. But every year sees

more and more of the old farms in the outskirts of the city giving place to the real city life and to those industries that are more common in a great city. The most important of these industries is manufacturing, and it is due to this especially that New York leads as an industrial center. When we consider that in manufacturing, New York is the leading city of the world, we have one of the best standards by which to measure its greatness. This alone would lead to a vast commerce; for we must dispose of the manufactured products, and so we send them by land and by sea to all parts of the globe. These we call our exports, and in

the total exports of New York city we must include those goods that come through it from the north, the south, and the west, bound for foreign lands. The commerce of the city includes also the great import trade, goods brought in ships to New York from foreign ports, some of it to remain there and some to pass through on the way to the inland cities of the United States. These imports are taxed by the United States government, which has what is known as a Customhouse, in New York city, where the customhouse officers collect taxes, known as customs or duties, on the goods brought into the port from foreign countries. The receipts of the New York customhouse are enormous, more than those of all the other customhouses of the United States together.

The post office of the city distributes about 4,000,000 letters a day, which shows us in another way what an enormous amount of business must be done in the city.

An important aid to the business of the city is the 200 or more banks, where merchants and others may deposit their money and draw against it by check, borrow money when they need it, and transact other business.

With all these signs of the business activity of New York before us, it is not difficult to realize that in industry and wealth it is truly the Imperial City of the Western Hemisphere.



THE NEW CUSTOMHOUSE.

PHYSICAL CONDITIONS DETERMINING ITS GROWTH AND IMPORTANCE

Situated at the mouth of the Hudson River, New York naturally receives from the north and west much of its commerce, and most of the European trade reaches or goes through the city. Its location on one of the finest harbors of the world made it



GRAND CENTRAL DEPOT, MANHATTAN.

even from the very first a natural trading post. Its climate is uniform and moderate, both in winter and in summer, and it is remarkably free from unhealthy or weakening surroundings. Again, the city with its borough harbors and coast indentations, has a water front

of some 350 miles, which gives it by far the greatest shipping and docking advantages of any city in the world. When we consider, further, that New York city is so located that it is easily reached by all railroad lines, from north, west, south, and east, it is not difficult to understand why it is the metropolis of the Western Hemisphere, nor to prophesy with certainty that some day it will become the great world city, of a size and importance far beyond that of any city the world has hitherto known.

MEANS OF TRANSPORTATION AND COMMUNICATION

We have already seen how man in his efforts to make trade and travel easy has improved the advantages offered him in New York state; how he has built highways, railroads, canals, bridges, steamships. New York city shows, even more than the rest of the state, what wonders the mind and hand of man may accomplish.

The ordinary means of travel within the limits of New York city to-day are: elevated roads, surface cars, underground railways, ferries, and bridges.

Elevated roads, of which the first was built in 1876, are found in the boroughs of Manhattan, The Bronx, and Brooklyn. These were the earliest means of rapid travel in New York city. For five cents, one may travel from the Battery by way of Second or Third Avenue through Harlem, and well into The Bronx; or, from the same starting point, by way of Sixth or Ninth avenues, to the Harlem River at 155th Street, where connections are made with the trains of the New York and Northern Railway for the city limits and the suburban towns. From the Manhattan end of the Brooklyn Bridge one may journey on the elevated road to Coney Island, to Ridgewood, or to Jamaica, and from the Manhattan end of the Williamsburg Bridge, another route to Jamaica and Ridgewood is open. The trains on the elevated roads are now operated by electricity.

Surface cars on most lines are run by electricity, though in a few cases by cable or even by horses. A great network of

surface cars spreads over the city, making it possible for people to travel about with speed and convenience to all parts of the town.

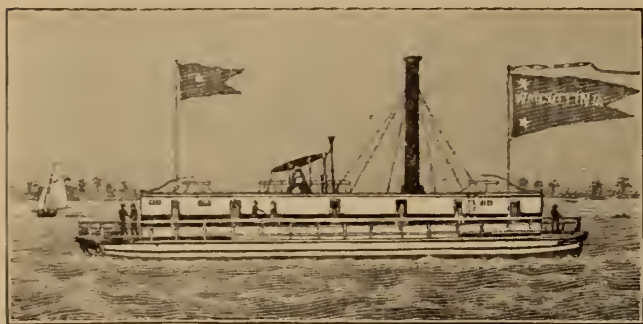
If the tracks of elevated and surface roads in New York city were in one straight line, they would reach to Kansas City, while

the surface lines alone would take us well beyond Chicago.

The Subway. — Another system of rapid transit is known as the Subway. Starting from the post office in Manhattan, one branch runs

underground to 42d Street and Fourth Avenue, then along 42d Street and out Broadway to Kingsbridge. A branch from 104th Street tunnels the Harlem River and extends to West Farms. The Subway also runs under Broadway and Whitehall Street, under the East River, and to the corner of Flatbush and Atlantic avenues, in Brooklyn. Another system connects Manhattan with Jersey City and Hoboken by tunnels under the Hudson. No one who has not traveled during “rush hours” can form any idea of the vast throng of people that crowd the cars and ferries of the great city.

Ferries. — As the boroughs of the city are separated mostly by bodies of water, the ferries, of which there are fifty, do a



EARLY STEAM FERRYBOAT.



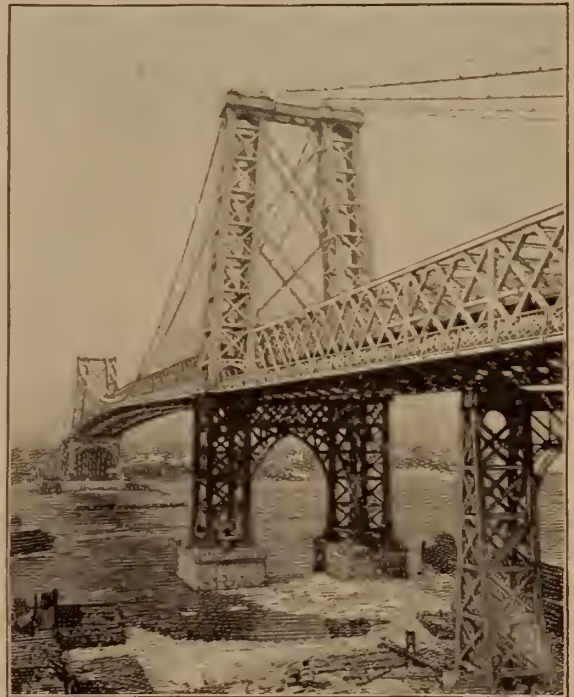
FERRYBOAT OF THE PRESENT TIME.

very important work. The oldest ferry in New York, dating back to Dutch colonial times, is the present Fulton Ferry, connecting Fulton Street, Manhattan, with Fulton Street, Brooklyn.



BROOKLYN BRIDGE.

Bridges.—Finding that the ferries would soon be unable to carry the increasing crowds between New York and Brooklyn, the people of those cities decided to have a bridge, and, in 1870, the famous Brooklyn Bridge was built to span the East River. This remarkable structure was one of the world's wonders. Its entire length is over a mile, and the central span measures 1600 feet. Its floor at the highest point is 135 feet from the river, so that sailing craft can manage to go under it easily. It has a roadway, a promenade, and tracks for elevated trains and surface cars. The Williamsburg Bridge



WILLIAMSBURG BRIDGE.

crosses the East River between Delancey Street, Manhattan, and South 5th Street, Brooklyn. Manhattan Bridge crosses the East River between Canal Street, Manhattan, and Nassau Street, Brooklyn. The Queensboro Bridge crosses the East River between 59th Street, Manhattan, and Crescent Street, Queens. High Bridge, crossing the Harlem River at 175th Street, was built in 1842 to carry the water from the Croton Aqueduct into New York city. Washington Bridge, a handsome structure supported by massive but graceful arches, connects West 181st Street with The Bronx. Other bridges are planned to span the East and Harlem rivers, and one is even projected to cross the Hudson.



HIGH BRIDGE.

PUBLIC WORKS

Water Works. — Probably the most difficult of our public problems is to supply about 5,000,000 people with good water in sufficient quantities for daily use. The supply in Manhattan is drawn from the Croton River, and from a number of lakes in Putnam and Westchester counties. Immense dams have

been built on the Croton River and on these lakes, which raise the water in some places over 100 feet. This brings an immense quantity of water into the city. It is pumped from the main reservoir in Central Park through iron mains laid under the surface of the streets. The higher portions of the city are supplied from the High Bridge reservoir, and the one at 97th Street and Ninth Avenue. Brooklyn is supplied mainly through the Ridgewood reservoir, from the streams and lakes of Long Island. An immense reservoir at Jerome Park will contain 1,500,000,000 gallons of water when completed. It is estimated that over 250,000,000 gallons are consumed daily in Manhattan and The Bronx, and 100,000,000 in Brooklyn.



RESERVOIR, HIGH BRIDGE.

All this water must in one form or another be disposed of, and for this purpose immense sewers or drains, some of them fifteen feet wide, extending under the streets of the city, back and forth and across some 1500 miles, carry off the waste and deposit it far out in the rivers. The fact that water is not allowed to lie stagnant in the city prevents a great deal of disease.

Streets and Driveways. — Different commissioners are appointed to look after the opening of new streets and the closing



WASHINGTON BRIDGE AND HARLEM RIVER DRIVEWAY.

of old ones, to see that the streets are kept clean and free from snow, to build boulevards (like the Riverside Drive in Manhattan, the Southern Boulevard in The Bronx, and the Eastern Parkway in Brooklyn), speedways (like the Harlem River Driveway in Manhat-

tan), and cycle paths (like that on the Ocean Parkway in Brooklyn, extending from Prospect Park to Coney Island).

Docks and Piers. — The docks and piers of New York city are controlled by one of the departments of the city government, which builds, repairs, and rents the wharves that line the shores of Manhattan and Brooklyn. There are about 130 piers on the island of Manhattan. Between 12th and Canal streets are located the piers of most of the great ocean liners, and near and below Canal



DRIVEWAY IN CENTRAL PARK.

Street are the river and coastwise steamers. Farther down the river the docks are mainly those of the ferries and freight lines. Extensive shipping is carried on also on both sides of the East River. At the foot of Canal Street the Ocean Steamship Company has a steam-heated wharf for the storage of southern fruit. A tour of the water front of New York city would be a trip of great value even to the city boy or girl. In such a walk he might study many things of interest; the names and nationalities of the ships painted at their sterns, the different cargoes loading and unloading, and the flags of the different nations afloat at the mastheads.



PIERS AND DOCKS, EAST RIVER.

PARKS

The people of a busy commercial city whose lives are passed in the hurry and rush of exciting events, must find some means of refreshing body and mind. Foremost among these means are our parks, many of them in the very heart of the crowded city, where the people may enjoy open fields, green grass, and shaded walks, without having to go out into the country. The most



VIEW IN CENTRAL PARK.

famous of these city breathing places is Central Park, which lies almost in the center of Manhattan, extending in length from 59th to 110th streets, a distance of two and one half miles, and half a mile in width. Central Park has been in existence

for nearly half a century. In the center of Brooklyn is Prospect Park, over half the size of Central Park, and scarcely less famous. Adjoining Prospect Park is what is known as the Parade Ground, where one may see thousands of men and boys playing baseball or football during the season. Each of these large parks has acres of beautiful meadow and woodland, with miles of well-made, wide, and shaded driveways, and charming paths across the fields, over hills, and through ravines. Each has a lake of several acres, on which are launches and rowboats in summer, and which, when frozen over in winter, are thrown open to thousands of skaters.



MARYLAND MONUMENT, PROSPECT PARK.

Each, too, is made more beautiful by the addition of many handsome stone arches and bridges, ornamental rustic houses, and monuments of bronze and of marble. Among the monuments in Central Park the most striking is the Egyptian obelisk, known as Cleopatra's Needle, which was presented to the city by the Khedive of Egypt in 1877. It is about 3500 years old, dating back before the time of Moses.



ENTRANCE TO PROSPECT PARK.

In The Bronx there are several parks, two of them, Van Cortlandt and Pelham Bay, much larger than Central Park, but as yet not fully developed. Van Cortlandt Park, in the western part of the borough, is a beautiful forest of 1100 acres in which is located the old Van Cortlandt Manor House, now used as a museum. Bronx Park,



VIEW IN CENTRAL PARK.

which contains the botanical gardens, the zoölogical gardens, the famous rocking stone, and the Lorillard Mansion, bids fair to be



VAN CORTLANDT MANOR HOUSE.

the most beautiful of all, especially in the neighborhood of the Bronx River. Pelham Bay Park, twice the size of Central Park, is in the northeastern part of the borough, and stretches along by the Sound to the northern city limits. These three parks are connected by magnificent roadways.

In addition to the large parks, there are more than a hundred small parks or squares, each of only a few acres, yet scattered about in such a way that nearly every inhabitant has one of these open spots somewhere near his home. Of these, Union Square, Madison Square, Tompkins Square, Bowling Green, Stuyvesant Square — all in Manhattan — are perhaps the best known.

PUBLIC SCHOOLS

The history of education in New York city may be said to have begun when the first Dutch schoolmaster, Adam Roelandtsen, set up his little school in New Amsterdam in 1633, and began to ring bells, comfort the sick, and

THE OBELISK,
CENTRAL PARK.

take in washing to eke out a poor living. From this small beginning, our great school system of to-day has grown, in which 600,000 children attend the public schools in 500 different buildings where 13,000 teachers do their daily work. In this vast system pupils from the kindergarten to the college are educated at the expense of the city, and the money for this purpose is raised almost entirely by a tax on the property owners of the city.



A NEW YORK SCHOOL BUILDING.

Some of the buildings used by the New York public schools are magnificent and possess every advantage for the comfort and education of the school children. Many of them seat 3000 children. One of the new schools is a six-story structure designed to seat 5000 pupils, and a number of elevators will convey the children to the upper floors.



A CLASS IN CARPENTRY WORK.

In the public schools, besides the regular studies, English, arithmetic, geography, history, etc., the girls are instructed in



HALL OF THE BOARD OF EDUCATION.

sewing, and where possible, the girls learn cooking and the boys do carpentry work.

The High Schools, of which there are twenty, furnish a more complete education to those desiring it, and prepare many of their pupils for college.

The College of the City of New York is free

to the graduates of the city high schools.

The elementary schools, high schools, and the college are under the control of the Board of Education, whose imposing building is located at 59th Street and Park Avenue, Manhattan. This Board, consisting of forty-six members, elects a City Superintendent of Schools, whose duty it is to see that the laws of the Board are enforced.

Summer schools and summer playgrounds are supported by the city for the children of the more crowded sections; and in the different boroughs there are eighty or more evening



AT AN EVENING LECTURE,

schools, where men and women, as well as working boys and girls, are given a chance to get an education. In many of the schools, public evening lectures on all subjects are given, which the parents of the pupils attend in large numbers.

OTHER PUBLIC INSTITUTIONS

Libraries. — New York city has many other means besides public schools and public lectures for the education of her citizens, and probably next in importance comes the vast system of public libraries. The efforts to provide free books for the reading public of the city has resulted in the union of five great sources, — the Astor Library, in Lafayette Place, the Lenox Library, on Fifth Avenue and 71st Street, the Tilden bequest, the former New York Free Circulating Library, and lastly the fund of over \$5,000,000 given by Andrew Carnegie. The central building of the new library, which has branches in all the boroughs, is being erected on Fifth Avenue, extending from 40th to 42d streets, and it will be the largest library building in the world.

Museums. — The American Museum of Natural History occupies the long block on 77th Street, between Central Park and Columbus Avenue. This mammoth building, now only about one quarter complete, has a frontage of nearly one sixth of a mile, and is a most imposing structure. Here may be seen a wonderful collection of stuffed birds and other animals, and many curious collections of fossils and mummies and relics of living and extinct nations and tribes. It would take years to



THE MUSEUM OF NATURAL HISTORY.

study carefully all that is here exhibited, but even a single visit to it is very profitable.

The Metropolitan Museum of Art is located in Central Park on the Fifth Avenue side, fronting on 83d Street. In it one may see the works of the greatest of the world's sculptors, workings in



THE METROPOLITAN MUSEUM OF ART.

bronze, famous historical tapestries, vases, pottery, and porcelains of all ages. Paintings by Rosa Bonheur, Meissonier, Breton, and many of the old masters, Van Dyck, Velasquez, Rubens, Hogarth, Rembrandt, are here.

The New York Botanical Garden occupies 250 acres of land in Bronx Park on the Harlem Railroad. The garden is being filled with hardy plants, both American and foreign; the more delicate specimens of plants, not adapted to our climate, are exhibited indoors. Near by are the New York Zoological Gardens, where many varieties of birds and other animals are kept in immense cages, large enough for them to continue their accustomed habits



THE BOTANICAL GARDEN.

of life. Ranges are made for buffaloes, dens for wolves and bears, ponds for beaver, seals, and alligators, houses for monkeys, and for all kinds of reptiles.



THE ZOOLOGICAL GARDENS.

While making the round of the museums one must not fail to visit the New York Aquarium at Battery

Park in the old immigrant building, Castle Garden. Here are found fishes from all the waters of the United States, and



THE AQUARIUM — EXTERIOR.

the hundred and more tanks occupied by them furnish subjects for study and amusement.

Among the other free amusements for the people are the

Recreation Piers, immense halls built out over the entire length of some of the large piers on the

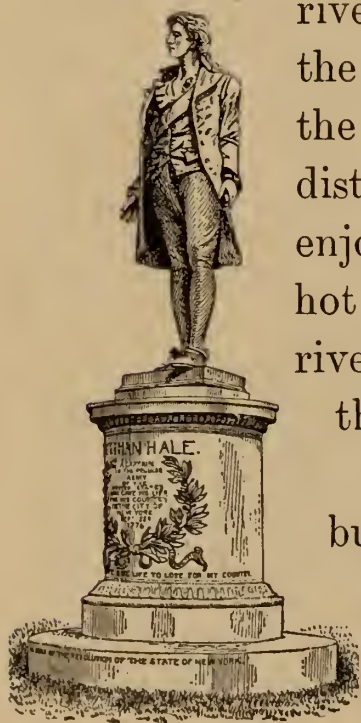
ivers, where the people of the crowded districts may enjoy on the



THE AQUARIUM — INTERIOR.

hot summer nights the breezes that blow over the river and the music which the city furnishes for their pleasure.

Monuments. — To keep before the minds of our busy people the memory of great men who have died, many monuments have been erected throughout the city. There are statues of Columbus, Stuyvesant, Washington, Lafayette, Franklin, Webster, Lincoln, Grant, Shake-



STATUE OF NATHAN HALE.



THE WASHINGTON ARCH.

speare, Irving, Scott, Morse, and many other famous soldiers, statesmen, authors, and inventors. The Washington Arch, at the foot of Fifth Avenue on Washington Square, was erected soon after the centennial celebration of Washington's inaugural.

Charities. — An important branch of the city government, established to protect the health of the poorer classes, is the Department of Public Charities, which provides stations where patients

may be treated for disease or undergo operations.

The Navy Yard of the United States is located at the head of Wallabout Bay on the East River, in Brooklyn. The immense grounds, covering nearly 150 acres, present many interesting sights. Among them are cannon and trophies of many wars. The stone dry-docks, capable of launching a first-class battle ship, are of spe-



ENTRANCE TO THE NAVY YARD.



NEW YORK POST OFFICE, MANHATTAN.

cial interest. Many vessels of the navy are stationed here at different times, and may be boarded by visitors by permit from their captains. The yard was founded in 1801, and is under the control of one of the rear admirals of the navy.

Baths.—Many public baths are located along the river fronts. During the summer months the daily average of bathers is 60,000, who are thus en-

abled to enjoy the benefits of salt-water bathing without expense.

Public Buildings.—The New York Post Office building, completed in 1875, is located at Broadway and Park Row. This office has many stations and substations scattered throughout Manhattan and The Bronx, and handles millions of letters a day. There are departments for the care of city mail, domestic mail, foreign mail, registered letters, and special delivery letters. Several mails are distributed daily, and several collections are made during the day from the thousands of



BROOKLYN POST OFFICE.

letter boxes along the streets. The Brooklyn Post Office occupies a fine, large building at the corner of Washington and Johnson streets. With its stations and substations, the service is as good as that in Manhattan.

The other boroughs are also provided with post offices.

In the City Hall Park, between Broadway and the Brooklyn Bridge, and just north of the Post Office, is located the City Hall,



CITY HALL.



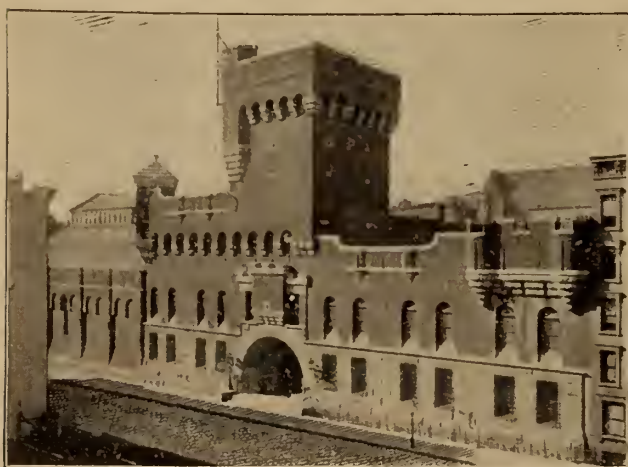
BROOKLYN BOROUGH HALL.

built a hundred years ago, one of the most perfect examples of early nineteenth-century architecture to be found in the state. In this building are the offices of the mayor and his assistants, of the borough president and other officers of

the borough of Manhattan. Near by are the County Court House and the new Hall of Records which was built to take the place of the former building which had existed since colonial times.

The former City Hall of Brooklyn, now known as the Brooklyn Borough Hall, is located in the triangle bounded by Fulton, Joralemon, and Court streets. This fine, white marble building faces a well-kept small park, and contains the offices of the borough president, and of the other borough officers. The County Court House is near by.

The State Arsenal, used for the storage of arms and ammunition, is located at the corner of Seventh Avenue and 35th



ARMORY OF THE 12TH REGIMENT.

Street, Manhattan. The city has eighteen armories which the various regiments of the national guard, the signal corps, squads of cavalry, etc., use for meetings, drill, and storage of arms and ammunition. The national guard is composed of enlisted citizens, who may be called out to protect the citizens

of the state, and to quell riots or other disturbances. The finest armories in the city are those of the 7th, 22d, and 71st regiments of Manhattan, and of the 13th and 23d regiments of Brooklyn.

Police. — For the purpose of preserving law and order and for the protection of life and property, New York has established what is generally known as one of the best police departments in the world. There are nearly 8000 uniformed police on the force, and the system is divided into eighty precincts, with a captain in command of each. The Central Police Office is in Mulberry Street, Manhattan, where the chief of police makes his headquarters.

GREAT MERCANTILE CONCERNS

From the very beginning of cities and large communities, the different trades, or as they were once called, the guilds, lived in localities by themselves. This was true in the old Dutch Colony days in New Amsterdam, where different trades located in particular streets, that took their names from the trade or occupation of the dwellers in it.

This grouping of occupations, the growth of nearly three centuries in New York city, is also true of the great mercantile concerns of to-day, especially in the borough of Manhattan.



LOWER BROADWAY.

For example, the great wholesale dry-goods houses are along and about Broadway, between Prince and Reade streets. This district of about 135 acres is said to have stored in it a larger amount of merchandise than can be found within an equal area anywhere else in the world.

On the east side of Manhattan, south of the Brooklyn Bridge, is the district known as the "Swamp," which is the center of the trade in hides and leather.

In and near Maiden Lane is the wholesale jewelry district,

while up town are the fashionable retail shops, in which are displayed rich collections of precious stones and metals.

About lower Fifth Avenue are most of the important book and magazine publishing concerns.

Most of the great newspaper offices are grouped in Park Row, near the City Hall, in what is known as Printing House



Copyright, 1897, by C. C. Langill.

PRINTING HOUSE SQUARE AND CITY HALL PARK.

Square, in the center of which stands a statue of Benjamin Franklin, the greatest of all printers.

Other districts are especially devoted to the sale of cutlery and hardware, of furniture, of clothing, of wooden ware, etc.

While retail shops of all kinds are to be found throughout the city, there are certain central localities where have grown up what we call "department stores." These concerns, occupying



HERALD SQUARE AND INTERSECTION OF BROADWAY AND SIXTH AVENUE.

buildings of many floors and immense area, sell under a single roof almost any line of articles you could imagine — dress goods, jewelry, hardware, furniture, groceries, and even meats and fish. The main department-store district of Manhattan is along Sixth Avenue from 14th to 33d Street. That of Brooklyn is centered on Fulton Street below Flatbush Avenue.

Most of the goods which we have considered are staple articles which may be kept in stock for a long time, but much of our food, such as vegetables, fruits, and fresh meat, has to be

brought to the city daily in fresh supply. The retail grocer or butcher goes every morning to one of the markets where he buys



WALLABOUT MARKET.

his day's supply for his local trade. There are a number of these markets, the chief of which is Washington Market, located in lower Manhattan, where more business is carried on than in all the others combined. In Brooklyn, by far the most important market is the Wallabout,

which occupies a convenient location on Wallabout Bay, and in its blocks of stores constitutes a little village of its own.

FINANCIAL CONCERNS

In any great city it is necessary that business should be carried on quickly and easily, and those concerns that help in this respect are very important. There are the regular business banks where the business man deposits his money. By doing this he is able to pay his bills by writing "checks," which are simply orders to the bank to pay out a part or all of the money he has deposited there. This is easier and more convenient than keeping large amounts of money on hand. These same banks, too, loan money to the business man when he wishes to buy quantities of goods and cannot pay for them until after he has sold them.

There are many of these banks in New York city, and some of them are housed in very handsome buildings.

Besides this kind of bank there are Savings Banks, where people of limited means may deposit their money, and by leaving it with the bank for months at a time earn interest money on it.

There are so many banks in New York that they have what is known as a Clearing House where the messengers from the different banks meet daily to exchange the checks which their banks have received and cashed for one another. The Clearing House is located in a substantial building on Cedar Street, the chief feature of which are the three wonderful vaults or safes which it contains. These safes are of great size and strength, and are provided with a most remarkable system of protection against fire and burglary.

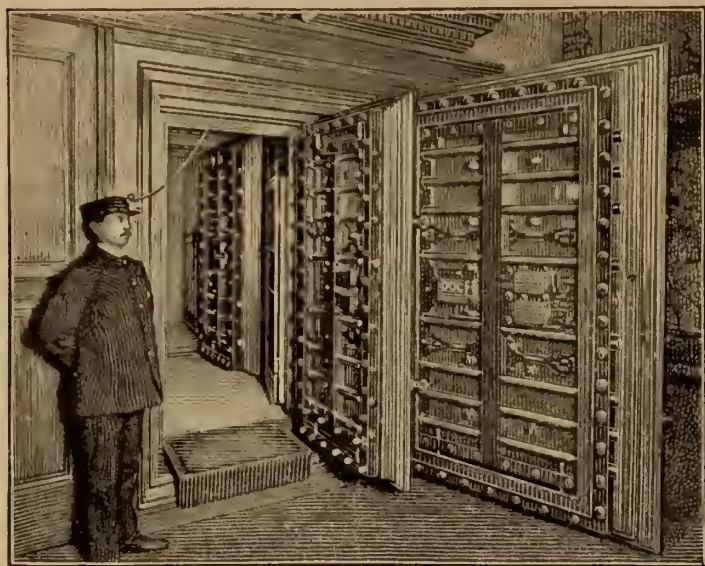


BROOKLYN SAVINGS BANK.



BOWERY SAVINGS BANK.

Wall Street is known the world over as the financial center of the United States. On the corner of Broad Street is the new



A BANK VAULT.

building of the Stock Exchange. It is in this exchange that the stocks of the great railroad, steamboat, and manufacturing companies are bought and sold — millions of dollars worth every day. In and about Wall Street are many banks and the offices of brokers who act as agents for people who wish to sell or buy stocks. On the street is the granite building of the United States Subtreasury, where millions of dollars are stored. It was in the old Federal Hall which formerly stood here, that Washington was inaugurated first President of the United States, and a statue of Washington in front of the present building commemorates the event.

For many hours in the day this Wall Street district is in a feverish excitement of business bustle



WALL STREET.

and worry. It is only as you look at the stately old Trinity Church at the head of the street, with its peaceful graveyard and its memories of two hundred years, that one is reminded that life is not all money getting.

MANUFACTURING CONCERNS

The city of New York is by far the greatest manufacturing center of the United States. It produces more than one half of the manufactures of the state and more than one tenth of those of the entire United States. New York and Pennsylvania are the only states in the Union whose manufactures are as extensive as those of this one great city. A total of 40,000 manufacturing concerns gives employment to half a million people. Even on Broadway, which at first sight seems to be devoted entirely to commerce, an immense amount of manufacturing, especially of clothing, is carried on. This is the leading product of the city, and clothing is made to the value of quarter of a billion dollars annually. When we stop to consider that 100,000 persons are engaged in this line of work, we can begin to get an idea of its importance. Workmen of all grades are employed, from the half-starved, poorly paid toilers in the East side sweat shops to the most fashionable of Fifth Avenue tailors. There are in the city several large hat factories, the greatest of which are in the borough of Brooklyn.

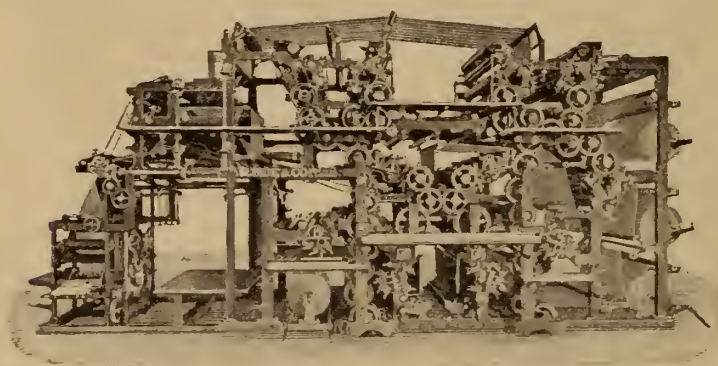
Next in importance to the clothing industry is the refining of sugar and molasses. Immense refineries are located along the East River front in Brooklyn, where boats laden with crude cane



SUGAR REFINERIES, BROOKLYN.

sugar from the far south deposit their cargoes. Here it is boiled in immense pans, and thousands of barrels of sugar ready for use are produced daily. Seven eighths of the city's refining is done in Brooklyn.

The printing and publishing of books, magazines, and newspapers is one of the main industries, and in it New York leads the cities of the United States.



A NEWSPAPER PRESS.

Some factories make a special business of setting up the type and making the plates from which books are printed; others do only the press work; others only bind books;

while some concerns carry on the whole operation from the type to the printed and bound book. All the leading newspaper offices do their own printing, using presses, into one end of which is fed

paper in large rolls, and from the other end of which are sent out the finished newspaper of a dozen or more pages, all folded and even counted, ready for selling to the newsdealers.

There are gas plants in which gas is manufactured for lighting, heating, and cooking, and sent out by pipes into residences and other buildings to a distance of many miles.

Foundries, cigar factories, breweries, machine shops, bakeries, carpenter shops, coffee and spice grinding mills, and many other concerns, are to be found in large numbers, and often occupying buildings of immense size.

Many of the large manufacturing concerns are located on the water front, where the work is more easily carried on because scows may land at their very doors, to bring coal for their great furnaces and to carry off ashes, to land raw materials and to take away the finished manufactures.

LEADING FACTORS DETERMINING PUBLIC IMPROVEMENTS

The public improvements of our city are of such magnitude as to lead us to inquire further into the causes that have determined them. The situation and physical features of the several boroughs are so entirely different, that different methods have to be followed in planning improvements. In Manhattan, whose shape is long and narrow, avenues have been laid out running in many cases parallel to the greatest length of Manhattan Island. Madison, Lexington, and the numbered avenues are straight roads, each of them several miles in length. Except in the

lower part of the borough and in a few sections settled before the rapid growth of the city really began, most of the cross streets are known by numbers and run at right angles to the avenues.



Copyright, 1900, by Detroit Photographic Co.

MULBERRY BEND, BEFORE IMPROVEMENTS WERE MADE.

formed by the union of many growing villages, we find a very different arrangement of streets. In fact, the original cow paths, lanes, and roads, irregular and crooked, form the beginnings of many of the important streets. Brooklyn therefore is much more difficult to travel around in, and its shape requires many intersecting car-lines.

This makes it very easy to find most places in Manhattan, and it determines the location and direction of the main lines of transportation.

In Brooklyn, fan-like in shape and



MULBERRY BEND AT THE PRESENT TIME.

The streets in both Manhattan and Brooklyn have been laid out in regular order by squares whenever this has been possible, and the tearing down of rows of wretched old buildings, irregularly located, has given room for new small parks. One of the most noted instances of this kind of improvement is the Mulberry Bend Park, in lower Manhattan. The Building Department of the city has condemned buildings in many other overcrowded sections.

The ferries, of which we have spoken, are made necessary of course by the fact that the boroughs are largely surrounded by water. Bridges came about naturally when the ferries were unable to handle the rapidly increasing traffic.

The increase in wealth and population of our city has made possible the building of the immense libraries, museums, and schools for the education of the people, and has made not only possible, but necessary, the system of water supply, drainage, and the other comforts and luxuries that we find necessary to our life of to-day.

NEW YORK HARBOR

New York Harbor, one of the largest and most beautiful in the world, excites the wonder and admiration of all strangers who gaze upon its beauties for the first time. As it has been a very important factor in the growth of the city, we will devote a space to the study of its most interesting features. The harbor consists of the Lower Bay, outside of the Narrows; the Upper Bay, from the junction of the Hudson and East

rivers to the Narrows; the lower Hudson, and the East River. The Lower Bay, in which there are nearly 100 square miles of anchorage, includes Raritan Bay, Sandy Hook Bay, and Jamaica Bay.



NORTH FROM BROOKLYN BRIDGE.

Two channels near Sandy Hook give entrance into the Lower Bay to vessels from the Ocean. The great International Yacht Races are held here.

The Upper Bay may be entered from

the ocean in three ways, — through the narrow straits on the western and northern sides of Staten Island; through Long Island

Sound and the East River; and through the Narrows from the Lower Bay. The Staten Island entrance is narrow and cannot be used by heavy vessels, and the East River is turbulent and treacherous, so that most vessels enter by way of the Narrows, which



SOUTH FROM BROOKLYN BRIDGE.

is guarded by Forts Wadsworth and Tompkins on the Staten Island side and Fort Hamilton on the Long Island shore.

The entrance to the East River from the Sound is protected by Fort Schuyler, located on a long peninsula called Throgs Neck, and by the fort at Willetts Point on the other side of the river. Five miles farther on are North Brother and South Brother islands, on the former of which smallpox patients are quarantined. A beautiful sail of a mile or so brings us to Randalls Island where are located schools, hospitals, and a House of Refuge for children. Just south of Randalls is Wards Island, which contains the city hospital for the insane. Blackwells



BLACKWELLS ISLAND.

Island farther south is a long, narrow strip of land, on which are many buildings, used mostly as prisons and erected by convict labor. The island, in spite of the gloomy uses to which it is put, is beautiful in appearance, especially in summer.

In the Upper Bay are located Governors, Bedloes, and Ellis islands, that look at a distance like little green dots in the glistening bay. All these islands belong to the United States government. Governors Island, with an area of sixty-five acres, contains a fort and is beautifully laid out with shade trees and walks. A parade ground is used by the government troops quartered here. Here also is fired the "sunset gun." Ellis Island is now used as the landing place of immigrants to New York. Castle Garden

near the Battery was formerly used for this purpose. On Bedloes, or Liberty Island, is located the famous Bartholdi Statue, presented by the people of France to the United States in 1886. This magnificent figure of Liberty Enlightening the World is a bronze



LIBERTY ISLAND.

statue 150 feet high and located on a pedestal as high as the figure itself. Especially at night, when the torch in the hand of the figure gives forth its brilliant light, it may be seen for miles around, a fitting symbol of the giant city,

that in its growth of three centuries has witnessed the struggles of brave men for liberty of speech and liberty of action.

Having now studied the metropolis as it is to-day, we will look back and see how it grew from the little settlement of New Amsterdam into the imperial city of New York.

LOCAL HISTORY

Discovery. — Nearly three centuries have passed since Henry Hudson, on his famous cruise along the eastern coast of America, first gazed upon the wild region where the greatest city of the Western World now stands. As he sailed through the Narrows into the Bay there rose before him a beautiful island, forest-covered and crossed by streams that flowed, some to the left into a mighty river, and some to the right into a wave-tossed

strait. Behind him a range of protecting hills that seemed to extend from the Jersey shore approached so close to Long Island that they formed an excellent harbor.

It was on September 12, 1609, that Hudson with his crew of the *Half Moon* sailed past Manhattan Island and the Palisades, and began his trip up the river beyond the Highlands to the site of Albany. Upon Hudson's return to Holland, Hendrick Christiansen and Adrian Block, stirred by his accounts, soon after fitted out trading-ships and came to this coun-



HENRY HUDSON.

try. Others followed, until the fur trade with the Indians became an important Dutch industry. A fort was erected in 1613 at the very southern point of Manhattan Island. This



THE *HALF MOON* ON THE HUDSON.

was not only a fur depot but a point from which the exploring and trading expeditions started along the coast. Thus early we see that Europeans were drawn to New York mainly for purposes of trade. A warehouse, protected by a fort, was built at Albany in the year 1614, and the United

New Netherlands Company thus began the work that later changed the little colony into the Empire State.

First Settlements.—It was nearly ten years later, in May, 1623, that the good ship, *New Netherlands*, brought a number of colonists to this country. Most of them were Walloons, people of Holland whose fathers had fled from France on account of religious troubles. Eight of these thirty families remained at the fort and settled the village of New Amsterdam, the beginning of New York city; others settled in Albany, New Jersey, and Connecticut, while a few crossed the East River, and, at Wallabout, where the Brooklyn Navy Yard is now located, built up a little settlement, which, however, disappeared soon after. The first permanent settlement on Long Island was made thirteen years later at New Amersfoort, afterward called Flatlands.

Flatbush.—One of the most interesting of the former Dutch towns within the present limits of New York city is Flatbush, settled just before the middle of the seventeenth century, and known as Midwout by the early Dutch. As long ago as 1654 it had a church where the settlers came for worship from Amersfoort, from New Utrecht, and from Brooklyn, then a mere hamlet near the site of the present borough hall. It now comprises many acres in Brooklyn, east and south of Prospect Park, where in certain sections are still to be found some very old houses of the Dutch style.

Peter Minuit.—For nearly forty years the Dutch West India Company sent out governors to manage the affairs of the colony. The first of these was Director General Peter Minuit, who arrived at New Amsterdam in 1626. He was a shrewd merchant and was very successful in directing the trade of the colony. But by far the greatest bargain that he made, and probably the most re-

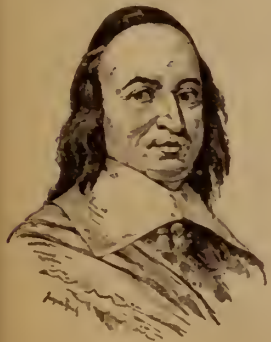
markable real-estate transaction in history, was the purchase of the island from the *Manhattan* Indians for twenty-four dollars' worth of beads and trinkets. And the strangest part of it is that both Dutch and Indians were probably equally sure that they had the better of the bargain. During the six years of Minuit's rule the coasting trade became a great in-



PURCHASE OF MANHATTAN ISLAND.

dustry, and the town rapidly increased in wealth and prosperity.

Peter Stuyvesant. — Governors Van Twiller and Kieft, the successors of Minuit, managed affairs so badly that in 1647 Peter



PETER STUYVESANT.

Stuyvesant was sent over by the company to straighten out matters. He was the last and the greatest of the Dutch governors, a very strict ruler, and a very just man, according to his own ideas of right and wrong. His idea of right was to serve his employers, the Dutch West India Company, no matter what the colonists wanted or deserved. The people, not getting their rights from Stuyvesant, appealed to the company, and succeeded, in 1653, in getting a city charter. This charter gave them the right to govern themselves through officers — called burgomasters and schepens — selected from the citizens of the town. Although

Governor Stuyvesant kept the reins of power in his own hands by appointing the officers from his own circle of friends, a step had been taken in the right direction—New Amsterdam had become a city.

In his dealing with the Indians, Governor Stuyvesant showed great courage and common sense, and through his wise efforts in this direction, the colony grew much stronger and better able to defend itself against attack.



NEW AMSTERDAM IN 1656.

The English for many years had claimed this region by right of the discoveries of the Cabots. Taking advantage of the discontent of the Dutch under Stuyvesant, they sent Colonel Nichols with a fleet to demand the surrender of New Netherlands. It was found that most of the Dutch were glad to yield, and in spite of the angry protest of Stuyvesant, the surrender of the fort and city of New Amsterdam was made on September 8, 1664, the control of New Netherlands was quietly transferred to the English, and New Amsterdam became New York.

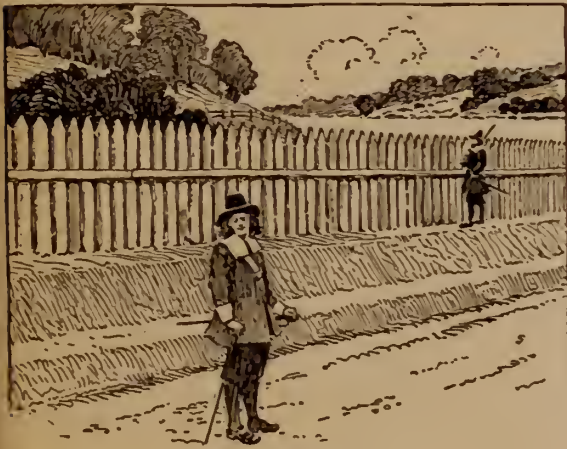
After the surrender Stuyvesant went to Holland, where he remained a short time. Upon his return to New York he retired to his “bouwerie,” or farm, which covered a large tract

of land extending from the present Fourth Avenue to the East River, in the neighborhood of 14th Street. Here the doughty old governor passed the rest of his life in peace and happiness. He died in 1672 at the age of eighty, and lies buried in the vaults of Saint Mark's Church on 10th Street and Second Avenue, where, among the monuments of many great men, there is a tablet to his memory.



STUYVESANT'S HOUSE ON THE BOWERY.

New York in 1664. — A strange picture indeed this quaint little town of New Amsterdam makes in the background of our city's history. At its north-



THE OLD WALL.

ern extremity a wall, built to keep out the English and the Indians, extended from river to river. At the eastern end was the Water Gate, and at the western end stood the City Gate, defended by a blockhouse and a little half-moon battery of two guns. This wall was made of twelve-foot logs, embedded three

feet deep in the earth, and strengthened here and there by towers and blockhouses. Inside of the wall, to the south, were a ditch, a rampart, and a broad lane, now known as Wall Street, bordered by the rude cabins of the lowest class of the people. The princi-

pal street of the city was De Heere Straat, now Broadway, which extended to the wall from the Bowling Green.

Bowling Green is one of the most interesting landmarks of the city. It was laid out early in the history of New Amsterdam as a common or

meeting ground for the people. Here occurred the marketing, the signing of treaties with the Indians, the parades of the military, and the celebration of victories.



BOWLING GREEN IN DUTCH TIMES.

Here the boys and girls met for play, and on a summer afternoon even the quiet and dignified burghers indulged in their favorite game of "bowls." It continued to be a fashionable promenade for 200 years, and in spite of all the changes that have taken



Copyright, 1900, by Detroit Photographic Co.

BOWLING GREEN AT PRESENT.

place in the city, the Bowling Green remains a public park to this day. In the old days one could step from the grassy walks of the Green into the inclosure of the little fort, within which

were the governor's mansion, the jail, and the stone church.

East from the fort, a road known as the Bridge Street led to the bridge across the principal canal which flowed along what is now Broad Street. On the other side of the



THE FORT IN 1664.

canal this road became the High Street and ran north to the wall at the Water Gate. Here began the river road to the Long Island Ferry, which was located at the present Pecks Slip.



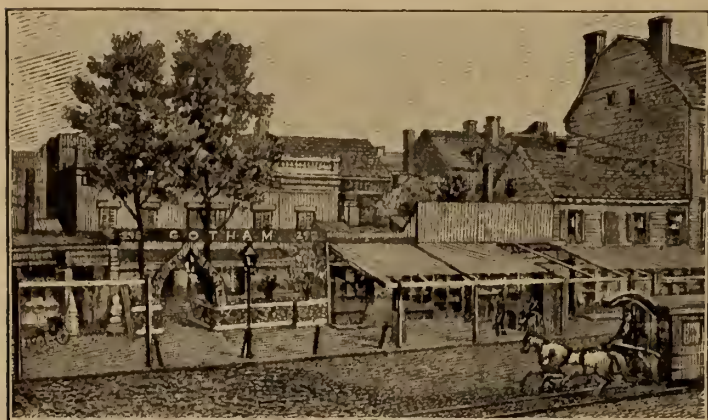
BROAD STREET, 1664.

The entire city then, in 1664, lay south of the present Wall Street. It contained some 250 houses and had a population of about 1400.

The Bowery. — It was in 1660 that the Indians caused so much trouble that the people living outside the city limits were directed either to come within the wall or to assemble in a village. This led to the formation of a little settlement called the “Bowery” near the present location of 13th Street and Third

Avenue, not far from Stuyvesant's country house. A lane connecting the settlement with the city was also known as the Bowery on account of the bouweries or farms that dotted its length. Just below Canal Street was the famous Bull Head

Tavern, managed during the Revolution by Richard Varian, a famous host. On the site of the old tavern was erected in 1826 the fashionable Bowery Theater, rebuilt in 1866



THE BOWERY SIXTY YEARS
AGO.

and known to-day as the Thalia. The Bowery's history is one of great changes. Beginning as a forest road, it became a country lane and then a village street; later, a broad avenue, the fashionable driveway and shopping district of sixty years ago. To-day, with its four tracks of cars, its elevated roads, its numerous cheap stores and places of amusement, it presents a scene busier than ever, perhaps, but in sad contrast to its appearance of years ago.



THE BOWERY AT PRESENT.

Harlem. — In 1661, the road that extended from New Amsterdam out through the Bowery to the little village of Harlem, just established on the bank of the East River, was little more than a forest path. For nearly two centuries the only direct approach to Harlem was along this forest road, and the growth of the village was of course very slow. To-day Harlem is a part of New York city. It has a splendid system



OLD HARLEM.



HARLEM AT PRESENT — 125TH STREET, MANHATTAN.

of broad streets and avenues, and contains many elegant public and private buildings, and important manufacturing and mercantile concerns. Its population would make it, by itself, a city of the first rank.

Dutch Customs and Industries. — New Amsterdam, as we have seen, was mainly a commercial city; but on account of its distance from large manufacturing centers, it was necessary that its citizens should make many of the articles which were needed

for daily use — so we find all the trades flourishing; and frequent mention is made in the early records of brewers, bakers, butchers, carpenters, glass makers, coopers, tailors, etc. Dairy and farm products were brought in from the Long Island farms, but each citizen had his own little garden alongside his house, where he raised many of the necessities of life.

The shop of the tradesman was generally on the lower floor of his house. We hear of one great department store owned by Cornelis Steenwyck, where shopping in all lines could be done. It occupied the second floor of the owner's fine house on Bridge Street, and offered bargains in meats and groceries, hardware, cloths, silks, and "notions."

The tavern keepers, of whom Martin Cregier, of No. 11 Broadway, was the most famous, did a thriving business. Daring adventurers penetrated far into the interior to trade with the Indians, bartering worthless trinkets for valuable furs. The coast trade brought the burghers of New Amsterdam into contact with Massachusetts on the north, and Virginia on the south, and enabled them to exchange with the English colonists. But by far the greatest and richest of the New Amsterdam industries were its shipping and foreign trade. Their ocean vessels imported hardware and dry goods from Holland, sugar and molasses from the Barbadoes, dyestuffs and fruits from Curaçoa, and numerous other articles from distant foreign ports.

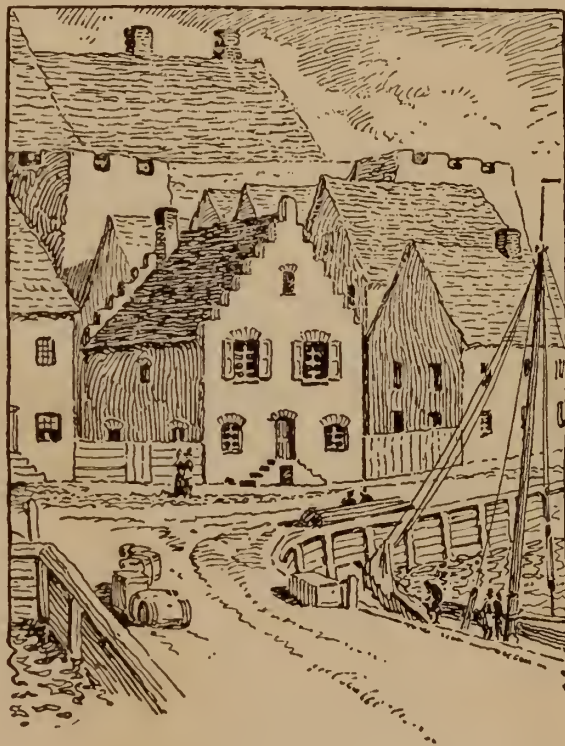
The old-fashioned Dutch house was built with the gable end facing the street, and the front was generally of stone. The houses of the better class, with their large rooms, sanded floors, and heavy furnishings, were very comfortable and even elegant.

There were, however, on the outskirts many very cheap and wretched houses, made of wood, the front yards often serving as hogpens. The average monthly rental of the New Amsterdam house was about \$1.25.

The Dutch as a class were very hospitable and enjoyed the good things of life with their friends. Our merry Santa Claus celebration at Christmas, our New Year's calling, and our coloring of Easter eggs are all inherited from the Dutch of New Amsterdam.

New York under the English.
— When the colonists in 1664 yielded the control of their government to the English, it was with the hope that they would enjoy greater freedom under their new rulers. There was some improvement, to be sure, but it did not come without a continued struggle to secure their rights from the English kings and their governors in New York.

In 1689, the lower class of the people rose in rebellion against the city government, seized the fort with the aid of the militia, and placed Captain Jacob Leisler in power, as governor. Leisler ruled wisely at first, but as he gained in power, he began to oppress the people, throwing some into prison, depriving others of life and property, and insulting in the most violent way all who



OLD DUTCH HOUSES.

were opposed to him. Many complaints against him were made to the English king, and Governor Sloughter, after a long delay, was sent over to take command of the colony. Leisler at first refused to yield, but was finally arrested and tried for treason, of which he was found guilty. He was executed, and peace was restored to the city that had suffered his misrule for nearly two years.

In the latter part of the seventeenth century the ocean was infested with swarms of pirates, who attacked trading vessels, robbed and murdered their crews, and then boldly returned to New York to boast of their exploits. Lord Bellomont, the new governor, was ordered to suppress them. He fitted out a man-of-war and selected for its captain, William Kidd, a respectable resident of Crown Street (now Liberty), with orders to sail against these sea robbers.

The governor's choice of Kidd was unfortunate, for within a year this respectable gentleman ran up the black flag and declared himself a pirate. In this career he was very successful, and the story of his evil deeds soon spread throughout the world. It is said that he buried immense quantities of gold which many foolish people have sought for to this day, but in vain. After a rather brief career of murder and robbery, he was captured and sent to England for trial. His execution followed without waste of time.

In 1725 occurred a most important event in the history of the city — the founding, by William Bradford, of the first New York newspaper, the *Weekly Gazette*. As this paper took the side of the governor in all his disputes with the people, the

people naturally felt the need of a paper of their own. This paper, the *New York Weekly Journal*, was started in 1734 by Peter Zenger, a pupil of Bradford. The *Journal* began with the *Gazette* that fierce newspaper war which is still going on, though less bitterly, in New York city to-day. But Zenger was not satisfied with fighting the *Gazette* only—he attacked the governor, the mayor, and others in authority, for which he was brought to trial. The result was a glorious victory for the



SHIPPING IN NEW YORK HARBOR, ABOUT 1776.

people, for Zenger was acquitted and the papers won the right, for all time, to discuss freely any public question. Since that time the press has been of great service in guarding the liberties of the people.

And so the struggle for liberty went on, the people fighting stubbornly against all kinds of setbacks and obstacles, until in 1776 they felt that they were strong enough to stand up in bold and open defiance of their oppressors, and to claim in full that for which they had been struggling for over a hundred years—liberty to think, to act, and to govern themselves as a free and independent people.

At the very outset of the Revolution disaster came to our city. The British were victorious in the bloody battle of Long Island, so that Washington and his army were compelled to give up New York city, which remained under British control for seven years. Not long after Washington had retreated, a terrible

fire swept over the city, and fully 500 houses were laid in ruins.



TOMB OF ALEXANDER HAMILTON.

ent building was erected in 1846. In the churchyard are many tombstones dating back to the time of the first church. Alexander Hamilton, New York's greatest statesman, lies buried there.

St. Paul's. — Trinity Church exercised from the start a great influence in New York city, and its power has continued to increase. To-day it has a number of chapels or branches scattered throughout the town. The most famous of these is

Trinity Church. — In its mad rush this fire completely destroyed Trinity Church, which stood on Broadway at the head of Wall Street. This famous church had been built in 1697, when the English Episcopalians wished a better place of worship than the old stone church in the fort. It was not rebuilt until after the war. The pres-

St. Paul's, built in 1764, on the upper end of the land belonging to Trinity, and now the oldest church building on Manhattan Island. An added interest is given to St. Paul's from the fact that Washington worshiped there when President of the United States.

Fraunces' Tavern.—Prominent among our relics of the past is the old tavern of Sam Fraunces, "Black Sam," a patriot of the Revolution. This old hostelry, built in 1730, still stands at the corner of Broad and Pearl streets. It was in 1762 that Fraunces became the proprietor, and from that time until 1776, when the British got control of the city, the tavern was a favorite resort of those patriots who were combining in the cause of American liberty. In its famous "Long Room," Washington



OLD ST. PAUL'S.



FRAUNCES' TAVERN.

dined that glorious November day in 1783, when at the head of his army he took possession of the city and saw the last of the British soldiers leave our shores. In this room also occurred the final scene of the Revolution—Washington's affecting farewell to the brave officers who had toiled and suffered with him through the dark days of that gloomy war.

It is interesting to note that the building was purchased in 1904 by the Society of the Sons of the Revolution, many of whose members are descended from the very officers who were present at the farewell. By this society the old tavern is to be preserved as an historical museum — a constant reminder of the time when our country was struggling for the liberties which we enjoy to-day.

APPENDIX

STATISTICS

THE STATE OF NEW YORK

Population, 1900	7,268,894 . . .	(1910)	9,113,614.
Area, Land	. . 47,654 sq. mi.		
Water	. . 1,550 sq. mi.		49,204 sq. mi.
No. of people to 1 sq. mi.	. . . . .		191.
Population, Males	. . . . .	(1900)	3,614,780.
Females	. . . . .	(1900)	3,654,114.
Native	. . . . .	(1900)	5,368,469.
Foreign	. . . . .	(1900)	1,900,425.
White	. . . . .	(1900)	7,156,881.
Colored	. . . . .	(1900)	112,013.
No. of farms in 1900	. . . . .		226,720.
Acreage of farms in 1900	. . . . .		22,648,109.
Value of farm property in 1900	. . . . .		\$1,069,723,895.
Value of farm products in 1900	. . . . .		\$245,270,600.
Capital invested in manufacturing, 1905	. . . . .		\$2,031,459,515.
Value of manufactured products, 1905	. . . . .		\$2,488,345,579.
No. of manufacturing establishments in 1905,			37,194.

COUNTIES

No.	COUNTY	POPULATION, 1910	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
1	Albany	173,666	528	Poultry and eggs, buckwheat, rye, onions, fruits.
2	Allegany	41,412	1,018	Live stock, dairy products, eggs, honey, wool, buckwheat, oats, potatoes, maple sugar, forest products.
3	Broome	78,809	696	Live stock, milk, eggs, strawberries, sugar beets.
4	Cattaraugus	65,919	1,330	Live stock, eggs, honey, maple sugar, apples, dairy and forest products.
5	Cayuga	67,106	722	Live stock, dairy products, poultry and eggs, honey, wool, tobacco, grains.
6	Chautauqua	105,126	1,062	Live stock, poultry and eggs, corn, oats, dairy and forest products, maple sugar, apples, grapes, small fruits.
7	Chemung	54,662	394	Buckwheat, tobacco.
8	Chenango	35,575	847	Live stock, dairy and forest products, eggs, maple sugar.
9	Clinton	48,230	1,041	Live stock, buckwheat, potatoes.
10	Columbia	43,658	647	Live stock, poultry, wool, corn, rye, fruits.
11	Cortland	29,249	486	Live stock, dairy products, maple sugar.
12	Delaware	45,575	1,531	Live stock, dairy and forest products, eggs, honey, buckwheat, maple sugar.
13	Dutchess	87,661	800	Live stock, milk, poultry and eggs, corn, rye, fruits.
14	Erie	528,985	1,040	Live stock, dairy products, poultry and eggs, potatoes, onions, grains, fruits.
15	Essex	33,458	1,834	
16	Franklin	45,717	1,717	Live stock, milk, potatoes, hops.
17	Fulton	44,534	486	Cheese.
18	Genesee	37,615	484	Live stock, wool, beans, grains, fruits.
19	Greene	30,214	644	Butter, rye, apples, pears.
20	Hamilton	4,373	1,747	
21	Herkimer	56,356	1,426	Live stock, milk, cheese, strawberries.
22	Jefferson	80,297	1,252	Live stock, dairy products, poultry and eggs, grains, maple sugar, strawberries, peas, forest products.
23	Kings	1,634,351	77	
24	Lewis	24,849	1,265	Live stock, milk and cheese, maple sugar.
25	Livingston	38,037	635	Live stock, cheese, wool, grains, onions, beans, nursery products.

COUNTIES — *Continued*

No.	COUNTY	POPULATION, 1910	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
26	Madison	39,289	649	Live stock, dairy products, eggs, honey, grains, onions, hops, blackberries.
27	Monroe	283,212	643	Live stock, dairy products, poultry and eggs, potatoes, onions, beans, nursery products, grains, fruits.
28	Montgomery	57,567	399	Milk, cheese, corn.
29	Nassau	83,930	252	Corn.
30	New York	2,762,522	63	
31	Niagara	92,036	522	Live stock, poultry and eggs, wool, onions, grains, fruits.
32	Oneida	154,157	1,180	Live stock, dairy products, poultry and eggs, grains, hops, strawberries.
33	Onondaga	200,298	794	Live stock, dairy products, poultry and eggs, wool, honey, potatoes, onions, tobacco, alfalfa, grains, small fruits.
34	Ontario	52,286	652	Live stock, poultry and eggs, wool, potatoes, onions, beans, hops, nursery products, grains, fruits.
35	Orange	115,751	819	Live stock, milk, poultry and eggs, corn, rye, onions, fruits.
36	Orleans	32,000	396	Live stock, wool, beans, grains, fruits.
37	Oswego	71,664	974	Live stock, dairy products, poultry and eggs, corn, tobacco, pears, strawberries.
38	Otsego	47,216	978	Live stock, dairy products, forest products, poultry and eggs, corn, oats, maple sugar, hops, forest products.
39	Putnam	14,665	239	
40	Queens	284,041	129	Onions.
41	Rensselaer	122,276	664	Dairy products, poultry, wool, corn, rye, potatoes, strawberries.
42	Richmond	85,969	57	
43	Rockland	46,873	180	
44	St. Lawrence	89,005	2,810	Live stock, dairy and forest products, poultry and eggs, wool, corn, oats, maple sugar.
45	Saratoga	61,917	830	Poultry and eggs, strawberries, grains.
46	Schenectady	88,235	210	Rye.
47	Schoharie	23,855	648	Live stock, dairy products, eggs, buckwheat, rye, hops.
48	Schuyler	14,004	339	Wool, buckwheat, wheat, plums, grapes.
49	Seneca	26,972	328	Grains, fruits.
50	Steuben	83,362	1,401	Live stock, dairy and forest products, poultry and eggs, honey, wool, potatoes, onions, tobacco, grapes, grains.

COUNTIES — *Continued*

No.	COUNTY	POPULATION, 1910	LAND AREA Sq. Mi.	CHIEF AGRICULTURAL PRODUCTS
51	Suffolk	96,138	918	Poultry and eggs, corn, potatoes, fruits.
52	Sullivan	33,808	967	Live stock, cheese, poultry and eggs, buckwheat, rye.
53	Tioga	25,624	518	Live stock, milk, buckwheat.
54	Tompkins	33,647	477	Live stock, eggs, honey, wool, buckwheat, wheat.
55	Ulster	91,769	1,128	Live stock, milk, poultry and eggs, forest products, onions, nuts, grains, fruits.
56	Warren	32,223	895	Live stock, dairy products, poultry, wool, corn, rye, potatoes.
57	Washington	47,778	797	Live stock, dairy and nursery products, poultry and eggs, onions, tobacco, beans, sugar beets, grains, fruits.
58	Wayne	50,179	624	Poultry, apples.
59	Westchester	283,055	450	Live stock, dairy products, eggs, wool, wheat, maple sugar, beans, apples.
60	Wyoming	31,880	603	Live stock, wool, corn, wheat, fruits.
61	Yates	18,642	348	

CITIES

No.	CITY	COUNTY	POPULATION, 1910	CHIEF MANUFACTURES
1	New York	New York, Kings, Queens, Richmond,	4,766,883	Clothing, sugar, printing and publishing.
2	Buffalo	Erie	423,715	Meat packing, machinery, linseed oil, cars, beer.
3	Rochester	Monroe	218,149	Clothing, boots and shoes, machinery, tobacco, flour.
4	Syracuse	Onondaga	137,249	Clothing, machinery, iron and steel, beer.
5	Albany	Albany	100,253	Cars, beer, machinery.
6	Yonkers	Westchester	79,803	Machinery, patent medicines.
7	Troy	Rensselaer	76,813	Men's furnishing goods, shirts, machinery, beer.
8	Utica	Oneida	74,419	Clothing, hosiery and knit goods, heaters.
9	Schenectady	Schenectady	72,826	Machinery, electrical supplies.
10	Binghamton	Broome	48,443	Tobacco and cigars, flour, clothing.
11	Elmira	Chemung	37,176	Lumber products, cars, hosiery and knit goods.
12	Auburn	Cayuga	34,668	Agricultural implements, machinery.
13	Jamestown	Chautauqua	31,297	Worsted goods, furniture, photographic materials.
14	Amsterdam	Montgomery	31,267	Hosiery and knit goods, carpets and rugs, linseed oil.
15	Mt. Vernon	Westchester	30,919	Electric power, flour, paper.
16	Niagara Falls	Niagara	30,445	
17	New Rochelle	Westchester	28,867	Machinery, patent medicines, tobacco and cigars.
18	Poughkeepsie	Dutchess	27,936	
19	Newburgh	Orange	27,805	Clothing, machinery.
20	Watertown	Jefferson	26,730	Machinery, paper and wood pulp, carriages, flour.
21	Kingston	Ulster	25,908	Worsted goods, furniture, photographic materials.

CITIES — *Continued*

No.	CITY	COUNTY	POPULATION, 1910	CHIEF MANUFACTURES
22	Cohoes	Albany	24,709	Hosiery and knit goods, machinery, house furnishing goods.
23	Oswego	Oswego	23,368	Machinery, hosiery and knit goods, malt, starch.
24	Gloversville	Fulton	20,642	Gloves, mittens, leather products.
25	Rome	Oneida	20,497	Brass, copper, mach'ry, knit g'ds.
26	Lockport	Niagara	17,970	Pumps, paper, canned goods.
27	Dunkirk	Chautauqua	17,221	Locomotives, lumber products.
28	Ogdensburg	St. Lawrence	15,933	Lumber products, flour, boats.
29	Middletown	Orange	15,313	Saws, hats, leather, condensed milk.
30	Glens Falls	Warren	15,243	Paper, lumber, collars and cuffs.
31	Watervliet	Albany	15,074	Iron goods, woolens, cars, steel.
32	Ithaca	Tompkins	14,802	Farm implements, paper, glass.
33	Olean	Cattaraugus	14,743	Refined petroleum, leather, glass.
34	Lackawanna	Erie	14,549	Iron and steel products.
35	Corning	Steuben	13,730	Glass making and cutting, terra cotta, brick, lumber products.
36	Hornell	Steuben	13,617	Silk goods, furniture, shoes, leather.
37	Geneva	Ontario	12,446	Stoves, optical instruments, malt.
38	Little Falls	Herkimer	12,273	Knit goods, dairy products, yarns.
39	North Tonawanda	Niagara	11,955	Iron, steel, engines.
40	Cortland	Cortland	11,504	Wire goods, vehicles, wall paper.
41	Hudson	Columbia	11,417	Knit goods, wheels, machinery.
42	Plattsburg	Clinton	11,138	Lumber products, iron.
43	Rensselaer	Rensselaer	10,711	Leather, felt, oil cloth, shirts.
44	Fulton	Oswego	10,480	Woolen goods, paper, flour, machinery.
45	Johnstown	Fulton	10,447	Gloves, mittens, leather products.
46	Oneonta	Otsego	9,491	Cigars, shirts, silk, flour.
47	Port Jervis	Orange	9,314	Glass, saws, shirts.
48	Oneida	Madison	8,317	Coffins, chairs, cigars, canned goods.
49	Tonawanda	Erie	8,290	Lumber products.

LARGER VILLAGES

HAVING A POPULATION OF OVER 5000 IN 1910

VILLAGE	COUNTY	POPULATION 1910	VILLAGE	COUNTY	POPULATION 1910
Albion	Orleans	5,016	Medina	Orleans	5,683
Batavia	Genesee	11,613	Newark	Wayne	6,227
Canandaigua	Ontario	7,217	North Tarrytown	Westchester	5,421
Catskill	Greene	5,296	Norwich	Chenango	7,422
Fredonia	Chautauqua	5,285	Ossining	Westchester	11,480
Haverstraw	Rockland	5,669	Peekskill	Westchester	15,245
Herkimer	Herkimer	7,520	Port Chester	Westchester	12,809
Hoosick Falls	Rensselaer	5,532	Salamanca	Cattaraugus	5,792
Hudson Falls	Washington	5,189	Saratoga Springs	Saratoga	12,693
Ilion	Herkimer	6,588	Seneca Falls	Seneca	6,588
Malone	Franklin	6,467	Solvay	Onondaga	5,139
Mamaroneck	Westchester	5,699	Tarrytown	Westchester	5,600
Matteawan	Dutchess	6,727	White Plains	Westchester	15,949
Mechanicsville	Saratoga	6,634			

INDEX

- Adirondacks (ăd-î-rôn'dăks), 14, 15, 17, 18, 24-26, 30-32.
- Albany (al'ba-nĩ), 19, 48, 50, 52-54, 57, 64, 66, 68, 109, 110.
- Alexandria Bay (ăl'ěgs-ăn'drĩ-a), 21.
- Allegany County (ăl'ě-gă'nĩ), 39.
- Allegheny Plateau, 16, 17, 20, 30, 36.
- Allegheny River, 20, 50.
- Amsterdam (ăn'ster-dăm'), 53.
- Anthony's Nose, 14.
- Appalachian Highland (ăp'pa-lă'chĩ-an), 12, 13, 43.
- Assembly, 64.
- Atlantic Avenue, 76.
Ocean, 12, 16, 69.
Slope, 42.
- Auburn (a'bûrn), 53.
- Ausable Chasm (ô-să'bl), 24.
River, 23.
- Avon (ă'vôn), 40.
- Barbadoes (băr-bă'dôz), 110.
- Battery, 75, 100.
Park, 89.
- Beacon Mountain (bē'kôn), 14.
- Bedloes Island, 69, 107, 108.
- Bellomont, Lord (bēl'a-mont), 120.
- Binghamton (bing'am-tôn), 52, 54, 58, 60.
- Black River, 17.
- Black River Canal, 48.
- Blackwells Island, 69, 107.
- Block, Adrian (blök), 109.
- Blue Point, 39.
- Blue Ridge Mountains, 13.
- Boston, 42, 57.
- Bowery, 115, 116.
Theater, 116.
- Bowling Green, (bō'ling), 84, 114.
- Bradford, William, 121.
- Bridge Street, 115, 118.
- Broad Street, 100, 115, 123.
- Broadway, 76, 92, 93, 95, 101, 103, 114, 118, 122.
- Bronx (brōnks), Borough of The, 69, 75, 78-80, 83, 92.
Park, 83, 89.
River, 84.
- Brooklyn (-lĩn), 51, 69, 75, 77-80, 82, 91, 94, 97, 101, 102, 104, 105, 110.
- Buffalo, 39, 40, 48, 50, 52, 54, 57, 58.
- Bullhead Tavern, 116.
- Cabots, the (kăb'ots), 112.
- California (kăl'ĩ-fô'nĩ-a), 37.
- Canada (kăn'a-da), 55.
- Canal Street, 80, 81, 116.
- Canisteo River (kăn'is-tě'ô), 50.
- Catskills (kăts/kĩls), 15, 16, 24, 60.
- Cattaraugus County (kăt'ta-ra'gūs), 39.
- Cayuga Canal, 48.
Lake, 26, 67.
- Cedar Street, 99.
- Central Lakes, 16, 17, 30.
Park, 79, 82, 83, 88.
- Champlain Canal (shăm-plăn'), 48, 57.
Lake, 9, 13, 14, 17, 25, 26, 39, 57.
Valley, 12.
- Chautauqua Lake (sha-ta'kwă), 24, 50.
- Chemung River (shē-mŭng'), 20, 51.
- Chenango River (shē-năn'fēō), 20, 60.
- Chicago (shē-ka'gō), 50.
- Christiansen, Hendrick (krĩst'yan-sěn), 109.
- City Gate, 113.
- City Hall Park, 93.

- Clinton, Governor (klĭn'/tŏn), 45.
 Cohoes (kŏ-hŏz'), 19, 52, 59.
 Falls, 24.
 College of the City of New York, 67.
 Columbia University (kŏ-lŭm'/bĭ-ä), 66.
 Columbus Avenue (kŏ-lŭm'/büs), 87.
 Coney Island (kŏ'nĭ), 75, 80.
 Connecticut (kŏn-nĕt'/ĭ-kŭt), 9, 110.
 Cornell University, 67.
 Corning (kŏr'nĭng), 54.
 Cornwall, 51.
 County Courts, 66.
 Court Street (kŏrt), 94.
 Cregier, Martin (krĕ-ġēr'), 118.
 Croton Aqueduct (krŏ'tŏn), 78.
 River, 78, 79.
 Crown Street, 120.
 Curaçao (kŏŏ'rä-sŏ'), 118.
- De Heere Straat (dĕ hār'ē strät), 114.
 Delancey Street (dĕ-län'sē), 78.
 Delaware County (dĕl'ä-wâr), 51.
 Mountains, 13, 16.
 River, 9, 16, 20, 51.
 River System, 17, 20, 24.
 Devil's Oven, 23.
 Dunderberg Mountain, 14, 19.
 Dunkirk (dŭn'kŏrk), 50, 55.
- East Albany, 57.
 Eastern Parkway, 80.
 East River, 22, 69, 76, 77, 91, 101, 106, 107, 110, 113.
 Ellis Island (ĕl'is), 69, 107.
 Elmira (ĕl-mĭ'rä), 54, 58.
 England (ĭn'ġlând), 121.
 Erie Canal (ĕ'rĭ), 45, 48, 55-57, 59.
 County, 34, 39.
 Lake, 9, 16, 20, 24, 25, 34, 50, 55, 57, 59.
- Finger Lakes, 26, 55.
 Fishkill, 58.
 Flatbush, 110.
 Avenue, 76, 97.
 Flatlands, 110.
- Fort Hamilton (hă'm'il-tŏn), 106.
 Schuyler (ski'lĕr), 107.
 Tompkins (tŏmp'kinz), 106.
 Wadsworth (Wŏdz'wurth), 106.
- France, 110.
 Fraunces, Sam (frŏn'sĕz), 123.
 Fraunces' Tavern, 123.
 Fulton, 29, 59.
 Street, 77, 97.
- Gazette, The Weekly*, 121.
 Genesee County (ġĕn'e-sĕ'), 40.
 River, 17, 23, 29, 30, 50, 59.
 Valley, 50, 56.
 George, Lake, 25, 26, 57.
 Glens Falls, 59.
 Gloversville (ġlŭv'ĕrz-vĭl), 53.
 Goat Island, 23.
 Governor, 65.
 Governors Island, 69, 107.
 Grand Island, 21.
 Great Alluvial Plain, 30.
 Great Lakes, 12, 22, 54, 55, 58.
 Great South Bay, 39.
 Green Mountains, 13, 25.
- Haines Falls, 24.
 Hamilton, Alexander, 122.
 Harlem (här'lĕm), 117.
 River, 22, 69, 75, 76, 78.
 Driveway, 80.
 Hasbrouck House (hăz'brŏök), 58.
 Haverstraw (hăv'ĕr-strä), 18.
 High Bridge, 78, 79.
 Highlands of the Hudson, 14, 19, 39, 109.
 High Street, 115.
 Holland, 110, 112, 119.
 Hornell (hŏrn'el), 54.
 Hudson, city of, 54.
 Henry, 109.
 Highlands of the, 14, 19, 39, 109.
 River, 12-15, 18-20, 22, 30, 33, 38-40, 42-44, 50, 57, 59, 60, 78, 81, 105, 106.
 River System, 17, 18, 21, 24, 51.
 Hunter Mountain, 15.

- Illinois (ĩl-lĩ-noiz'), 33.
 Iowa (ĩ'õ-wā), 33, 37.
 Ithaca (ĩth'ā-kā), 54, 57.
 Jamaica (jā-mā'kā), 75
 Bay, 106.
 Jamestown, 50.
 Jerome Park (je-rõm'), 79.
 Johnstown, 53.
 Joralemon Street (je-rõl'ẽ-mũn), 94.
 Kaaterskill Falls (kāv'ter-skĩl), 16, 24.
 Kansas (kān'zās), 37.
 City, 76.
 Kidd, William, 120.
 Kieft, Governor (kēft), 111.
 Kingsbridge, 76.
 King's College, 67.
 County, 69.
 Kingston (kĩngz'tõn), 54, 59, 60.
 Lafayette Place (lā-fā-ět'), 87.
 Lake Ridge, 13.
 Leisler, Captain Jacob (lis'ler), 120.
 Lexington Avenue, (lěk'sĩng-tõn), 103.
 Liberty Island, 108.
 Street, 120.
 Library, State, 68.
 Little Falls, 53, 59.
 Livingston County (lĩv'ĩng-stõn), 40.
 Lockport, 52.
 Long Island, 9, 22, 33, 38, 39, 77, 79, 109,
 110, 118, 122.
 Long Island City, 39.
 Sound, 9, 106.
 Lorillard Mansion, 83.
 Lower Bay, 105, 106.
 Madison Avenue (mād'ĩ-son), 103.
 Square, 84.
 Maiden Lane, 95.
 Manhattan, Borough of (mān-hāt'an), 69,
 75-80, 82, 84, 86, 92-95, 97, 98, 103-
 105, 117.
 Indians, 111.
 Island, 22, 69, 103, 109, 123.
 Maryland Monument, 82.
 Massachusetts (mās'ā-chũ'sets), 9, 13, 118.
 Mexico, Gulf of (měks'ĩ-kõ), 17, 20.
 Midwout (mĩd'wout), 110.
 Military Academy, U.S., 68.
 Minuit, Peter (mĩn'u-it), 110, 111.
 Mississippi River (mĩs'ĩs-sĩp'pĩ), 20.
 System, 17, 20, 24, 50.
 Mohawk River (mõ'hāk), 19, 20, 24, 30,
 44, 57.
 Valley, 13, 15, 43, 44, 55, 56, 59.
 Montcalm, General (mõnt-kām'), 55.
 Montreal (mõnt're-āl'), 57.
 Morningside Heights, 67.
 Mountain Ridge, 13.
 Mount Clinton, 15.
 Dix, 15.
 Marcy, 14.
 McIntyre (māc'ĩn-tĩr'), 14.
 Vernon, 54.
 Mulberry Bend Park, 105.
 Street, 94.
 Museum, State, 68.
 Narrows, the, 105, 106, 108.
 Nassau County (nās'ā), 69.
 Neversink River, 20.
 New Amersfoort (ām'erz-fõort), 110.
 New Amsterdam, 95, 108, 112, 113, 114,
 117-119.
 Newburgh, 19, 54, 58.
 New England, 9, 27, 28.
 New Jersey, 9, 12, 18, 78, 110.
 New Netherlands (nēth'er-landz), 110, 112.
 New Utrecht (ũ'trěkt), 110.
 New York Bay, 12, 18, 22, 69.
 City, 18, 42-44, 50-52, 54, 57, 67, 69-
 124.
 County, 27.
 Harbor, 105.
 University, 67.
 Weekly Journal, 121.
 Niagara Falls (nĩ-āg'ā-rā), 22, 29, 52, 59.
 River, 9, 17, 21, 23, 33.
 Nichols, Colonel, 112.
 Normal College, State, 68.

- North Brother Island, 107.
 Tonawanda (tõn'ä-wän'dä), 53.
 Nyack (nī'äk), 118.
- Ocean Parkway, 80.
 Ohio (ō-hī'ō), 33.
 Olean (ō'lē-än'), 39, 60.
 Oneida (ō-nī'dä), 51.
 Lake, 26.
 Lake Canal, 48.
 River, 17.
- Onondaga County (õn'õn-dä'gä), 39, 40.
 Ontario (õn-tä'rī-ō), 9.
 Lake, 9, 16, 17, 21-23, 25, 26, 33, 50, 55, 57.
 Orange County, 51.
 Oswego (õs-wē'gō), 29, 53-55.
 Canal, 48, 56.
 River, 17, 26.
- Otis Summit, 15.
 Otsego Lake (õt-sē'gō), 20, 24.
 Oyster Island, 69.
- Palisades (päl-ī-sādz'), 18, 109.
 Parade Ground, 82.
 Park Row, 92, 96.
 Pearl Street, 123.
 Peck Slip, 115.
 Peekskill, 19.
 Pelham Bay Park (pēl'am), 83, 84.
 Pennsylvania (pēn'sīl-vā'nī-ä), 9, 17, 20, 36,
 51, 55, 58, 101.
 Philadelphia (fīl'ä-dēl'fī-ä), 42.
 Portage Falls (pört'āj), 23.
 Port Jervis, 9, 51.
 Potsdam, 39.
 Poughkeepsie (pō-kīp'sī), 54, 57, 68.
 Prospect Park, 80, 82, 83, 110.
 Putnam County (püt'näm), 78.
- Quebec (kwē-bēk'), 9.
 Queens, Borough of, 69.
- Randalls Island, 69, 107.
 Raritan Bay (râr'īt-an), 106.
 Rensselaer (rēn'sē-lēr), 57.
 Rhode Island (rōd), 27.
- Richfield, 40.
 Richmond, Borough of, 69.
 Ridgewood, 75, 79.
 Riverside Drive, 80.
 Rochester (rōch'es-ter), 29, 38, 52, 53, 59.
 Falls, 23.
 Rome, 19, 53, 56.
- Saint Lawrence County (lä'rens), 27, 33.
 Gulf of, 17.
 River, 9, 13, 17, 21, 26.
 River System, 17, 20, 21, 24, 25, 50.
 Valley, 12, 33, 43.
- Saint Paul's Church, 122, 123.
 Sandy Hook, 106.
 Sandy Hook Bay, 106.
 Saratoga Lake (sär-ä-tō'gä), 41.
 Springs, 40.
- Schenectady (skē-nēk'tä-dī), 48, 53, 56.
 Schoharie County (skō-här'ī), 57.
 Senate, 64.
 Seneca Canal (sēn'ē-ka), 48.
 Lake, 26.
 River, 17.
- Sharon (shâr'on), 40.
 Shawangunk Mountains (shõn'gũm), 13,
 16, 51.
 Sheriff, 66.
- Slide Mountain, 15.
 Sloughter, Governor (slaw'ter), 120.
 South Brother Island, 107.
 Southern Boulevard (bõo'lē-värd'), 80.
 Staten Island (stät'en), 22, 69, 106.
 Steenwyck Cornelis (stēn'wīk), 118.
 Steuben County (stū'bēn), 33.
 Stony Point, 19.
 Storm King, 14.
 Stuyvesant, Peter (stī've-sant), 111, 112,
 116.
 Square, 84.
- Sullivan County, 51.
 Supervisors, Board of, 66.
 Susquehanna River (sūs'kwē-hän'ä), 16, 20,
 30, 51, 60.
 System, 17, 20, 24, 50.
- Syracuse (sīr'ä-kūs'), 52, 53, 56, 59.

- Taconic Highlands (tá-kǒn'ík), 13.
 Range, 14.
 Tappan Zee (táp'an zē), 18.
 Taughannock Falls (tá-gǎn'ók), 27.
 Texas, 27, 38.
 Thalia Theater (thāl'e-ǎ), 116.
 Thousand Islands, 21.
 Throgs Neck, 107.
 Ticonderoga Creek (tí-kǒn'der-ō'gǎ), 26.
 Fort, 26.
 Tompkins Square, 84.
 Tonawanda (tǒn'a-wǒn'dǎ), 53.
 Trenton Falls, 24.
 Trinity Church, 122, 123.
 Tri-State Rock, 9.
 Troy, 52, 53, 57.

 Ulster County, 39.
 Union Square, 84.
 University Heights, 67.
 Upper Bay, 105-107.

 Van Cortlandt Park, 83.
 Van Twiller, Governor, 111.
 Varian, Richard (vǎr'i-ǎn), 116.
 Vassar College, 68.
 Vermont, 9, 13, 37.
 Virginia (ver-jǐn'í-ǎ), 118.
 Wallabout (wǒl'a-bowt), 110.
 Bay, 91, 98.
 Wallabout Market, 98.
 Walloons (wǒl-lōonz'), 110.
 Wall Street, 100, 115, 122.
 Wards Island, 69, 107.
 Washington Bridge, 78.
 County, 39.
 Market, 98.
 Square, 91.
 Street, 93.
 Washington, George, 77, 122, 123.
 Water Gate, 113.
 Street, 115.
 Watervliet (wa'ter-vlēt'), 57.
 Watkins Falls, 26.
 Glen, 26.
 Weehawken, 18, 51.
 Wellsville, 60.
 West Canada Creek, 24.
 Westchester County, 78.
 West Farms, 76.
 West Point, 68.
 Whirlpool Rapids, 23.
 Whitehall Street, 76.
 Willetts Point, 107.
 Williamsburg Bridge, 75, 77, 78.
 Wyoming County (wí-ō'mǐng), 40.

 Yonkers (yǒnk'ērz), 52, 54.

 Zenger, Peter, 121.

NEW SERIES OF THE NATURAL GEOGRAPHIES

REDWAY AND HINMAN

TWO BOOK OR FOUR BOOK EDITION

Introductory Geography . . . \$0.60	School Geography . . . \$1.25
In two parts, each40	In two parts, each75

IN the new series of these sterling geographies emphasis is laid on industrial, commercial, and political geography, with just enough physiography to bring out the causal relations.

¶¶ The text is clear, simple, interesting, and explicit. The pictures are distinguished for their aptness and perfect illustrative character. Two sets of maps are provided, one for reference, and the other for study, the latter having corresponding maps drawn to the same scale.

¶¶ The **INTRODUCTORY GEOGRAPHY** develops the subject in accordance with the child's comprehension, each lesson paving the way for the next. In the treatment of the United States the physiographic, historical, political, industrial, and commercial conditions are taken up in their respective order, the chief industries and the localities devoted largely to each receiving more than usual consideration. The country is regarded as being divided into five industrial sections.

¶¶ In the **SCHOOL GEOGRAPHY** a special feature is the presentation of the basal principles of physical and general geography in simple, untechnical language, arranged in numbered paragraphs. In subsequent pages constant reference is made to these principles, but in each case accompanied by the paragraph number. This greatly simplifies the work, and makes it possible to take up the formal study of these introductory lessons after the remainder of the book has been completed. With a view to enriching the course, numerous specific references are given to selected geographical reading.

AMERICAN BOOK COMPANY

CARPENTER'S GEOGRAPHICAL READERS

By FRANK G. CARPENTER

North America	\$0.60
South America . . . . .	.60
Europe . . . . .	.70
Asia . . . . .	.60

Africa	\$0.60
Australia, Our Colonies, and Other Islands of the Sea . . . . .	.60

THE purpose of Carpenter's Geographical Readers is to supplement the regular text-books on the subject, giving life and interest to the study. In this way they accomplish two separate purposes—they afford valuable instruction in geography, and provide drill in reading.

¶ The books are intensely absorbing—they were written by Mr. Carpenter on the spots described, and present an accurate pen-picture of places and people. The style is simple and easy, and throughout each volume there runs a strong personal note which makes the reader feel that he is actually seeing everything with his own eyes.

¶ As advocated by leading educators, attention is directed principally to the various peoples, their strange customs and ways of living, and to some extent to their economic condition. At the same time, there is included a graphic description of the curious animals, rare birds, wonderful physical features, natural resources, and great industries of each country.

¶ The numerous illustrations and maps deserve special mention. The illustrations for the most part are reproductions of photographs taken by the author, and are in perfect harmony with the text. The maps showing the route taken over each continent are one of the best features of the series.

¶ The publication of this series has been a distinct relief to teachers. No longer is the study of geography dry and meaningless, no longer is it a waste of time. Since the appearance of the first volume, Carpenter's Readers have met with an extraordinary success throughout the country.

AMERICAN BOOK COMPANY

HISTORICAL READERS

By H. A. GUERBER

Story of the Thirteen Colonies	\$0.65
Story of the Great Republic . . . . .	.65
Story of the English . . . . .	.65
Story of Old France . . . . .	.65
Story of Modern France . . . . .	.65
Story of the Chosen People . . . . .	.60
Story of the Greeks . . . . .	.60
Story of the Romans . . . . .	.60

ALTHOUGH these popular books are intended primarily for supplementary reading, they will be found quite as valuable in adding life and interest to the formal study of history. Beginning with the fifth school year, they can be used with profit in any of the upper grammar grades.

¶ In these volumes the history of some of the world's peoples has taken the form of stories in which the principal events are centered about the lives of great men of all times. Throughout the attempt has been made to give in simple, forceful language an authentic account of famous deeds, and to present a stirring and lifelike picture of life and customs. Strictly military and political history have never been emphasized.

¶ No pains has been spared to interest boys and girls, to impart useful information, and to provide valuable lessons of patriotism, truthfulness, courage, patience, honesty, and industry, which will make them good men and women. Many incidents and anecdotes, not included in larger works, are interspersed among the stories, because they are so frequently used in art and literature that familiarity with them is indispensable. The illustrations are unusually good.

¶ The author's Myths of Greece and Rome, Myths of Northern Lands, and Legends of the Middle Ages, each, price \$1.50, present a fascinating account of those wonderful legends and tales of mythology which should be known to everyone. Seventh and eighth year pupils will delight in them.

AMERICAN BOOK COMPANY

BARNES'S NEW HISTORIES OF THE UNITED STATES

Elementary History . . \$0.60

School History . . . \$1.00

IN their present form, these standard histories are strictly modern both as to contents and as to dress. They not only have been brought down to the present time, but they also embody the most approved methods of teaching history as recommended by the Committees of Ten and Fifteen. In each volume the illustrations are numerous and appropriate, while the maps are complete and clear.

¶ BARNES'S ELEMENTARY HISTORY has been entirely re-written by that charming writer for children, Dr. James Baldwin. It tells in an intensely interesting manner the story of the discovery, settlement, and development of the United States in a series of biographies, but it presents only those necessary to the continuity of the narrative as a whole.

¶ The story of no man's life is given merely because of the man, but because it throws light upon the manners of the times, and the general progress of events. Each biography in language and thought is well adapted to the capabilities of young children, and is followed by a brief review with suggestive questions.

¶ In BARNES'S SCHOOL HISTORY a consistent effort has been made to retain those features of the older volume (Barnes's Brief History), which gave it its extraordinary popularity: its main division into epochs; its topical arrangement; its interesting foot-notes containing collateral facts, minor events, and brief biographies; and, most important of all, the fascinating literary style of its author, Dr. Steele.

¶ The treatment of battles has been somewhat curtailed, and greater prominence given to the life of the people, and to the wonderful development of our industries. Carefully selected references for reading have been inserted at intervals.

AMERICAN BOOK COMPANY

Frank Wendling & Co.

Thomas Wendling



Sh

the

